

LEATH & ROSS'S HOMŒOPATHIC PHARMACIES, 9 VERE STREET, W., And 5 ST. PAUL'S CHURCHYARD, E.C., LONDON.

Those desirous of
BECOMING AGENTS
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ESTABLISHED 1835.

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As it appears open.



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CONTENTS REALISE £7 1s. 6d.

Agents for L. & R.'s Medicines are now established in every town of any importance in England, some of the principal towns in Ireland and Scotland, several of the British Colonies, and India and America. Upwards of 1,800 persons have accepted the Agency, and many have found this branch a profitable auxiliary to their other business.

THE NEW FAMILY CHEST
Contains 28 Bottles of the most useful Homœopathic Medicines, a Guide, giving the treatment of all common complaints, the uses of the Medicines, proper doses, &c. In the lid are the two externals most in use, viz., Arnica and Calendula. It can be fitted to hold either Pilules or Tinctures. Price 25/-; trade price, 16/8.

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GLOBULES—Medicated any strength up to the 30th potency.

Sixpenny Tubes, 3/- per dozen.
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Shilling " 6/- "

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PILULES—Medicated to any strength up to the 30th potency

Sixpenny Bottles, 3/- per dozen.
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Sixpenny Bottles, 4/- per dozen.
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Special quotations for large quantities.

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BERBERINE, 1/1½, 2/9, 4/6 ... 9/6, 22/, 36/.
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AUROSINE, 1/, 1/6, 2/6 ... 8/, 12/, 20/.
ANTISEPTIC TOOTH TINCTURE, 1/, 1/6, 2/6 ... 8/, 12/, 20/.

NEURALINE, 1/1½, 2/9, 4/6 ... 9/6, 22/, 36/.
GLYKALINE, 1/1½, 2/9, 4/6 ... 9/6, 22/, 36/.
ODONTALGIC ESSENCE, 1/1½, 2/9, 4/6 ... 9/6, 22/, 36/.

OZONIZED OIL, 1/, 1/6, 2/6 ... 8/, 12/, 20/.
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The price of VASELINE is now so low, and its value so universally recognised, that it is coming into general use in Medicine, Pharmacy, and the Arts.

Put up in 1-lb. and 5-lb. tins for dispensing, &c., and in larger packages for manufacturing purposes.

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As an emollient, Vaseline is superior to any other substance yet discovered. Its marvellous healing and restoring qualities excel everything else, and it is rapidly taking its place on the toilet table to the exclusion of the various complexion powders, pomades, cosmetics, and other compounds. It will keep the skin clearer, softer, and smoother than any cosmetic ever invented, and will preserve the youthful beauty and freshness of the healthy complexion.

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Pamphlets containing these editorials and recommendations post free.

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CAMPHORATED VASELINE.
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All in two sizes. Bottles in fancy card cases.

No. 1 size, 1s. each in Boxes (wood) of 1 dozen, 8s. per dozen.

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Ditto, ditto, ditto, and in 1-lb. tins.

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VASELINE CONFECTIONS.

For internal use. Pulmonary and other complaints. In Fancy Tin Box, 8s. per doz.

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POMADE VASELINE

will make the Hair grow when nothing else will. It keeps the Scalp free from Seurf and Dandriff. Contains no animal matter, and can never become rancid. In 3 sizes. Bottles, in Cardboard Boxes, 8s., 16s., and white in colour, superior Perfumed, glass stoppers, 33s.

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A liquid preparation of Petroleum for Ladies' use. Bottles, enclosed in Cardboard Cases, 36s. per dozen.

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VASELINE CAMPHOR ICE,

for the Lips, Pimples, Blotches. 1 size, 8s. per dozen.

VASELINE TOILET SOAP,

6d. and 1s. Tablets, 4s. per dozen net, and 9s., less 15 per cent. discount.

VASELINE TAR SOAP.

Tablets 1s. each, 9s. per dozen Tablets, less 15 per cent. discount.

VASELINE TOILET SOAP.

Superfine Tablets, 1s. 3d. each, 12s. per dozen, less 15 per cent. discount.

All soaps made, except the above, are derived from coarse animal fats, in many cases rancid, and in all cases liable to become rancid. There can be nothing healing or soothing to the skin in soaps so manufactured, however pleasantly perfumed they may be.

So-called detergent soaps are made in this manner, and flavoured with a strong irritating chemical which injures the skin. Vaseline is used by ALL MEDICAL MEN as the most healing substance known; and made into soap, retains all its virtues. It is the most delicate and elegant Toilet Soap that is made.

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Vaseline Harness Paste, Round Tins	1s. 6d. each	12s. per dozen.
Vaseline Axle Paste	"	...	1s. 6d. "	12s. "
Vaseline Boot Paste	"	...	6d. "	...	...	4s. "

VETERINARY VASELINE.

FOR DISEASES IN ANIMALS, LOSS OF HAIR, ETC.

1-lb. Tins	...	1s. 6d. each, 12s. per doz.	5-lb. Tins	...	6s. each, 4s. per tin.
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Also in larger packages for manufacturing purposes.

This article is also the best anti-corrosive in use for preventing rust in guns, arms of all kinds, household utensils, &c.

Standard Ointments, with Vaseline as a base, can be kept without deterioration until used up.
In 1-lb. jars at 2s. 6d. each.

Price List, with full particulars of Medicinal, Pharmaceutical, and Toilet Preparations of Vaseline, free by post.

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REGISTERED.

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J. Hart & Son,

Sponge Importers,

55^a, Houndsditch,

*and at London,
Greece and Turkey.*

We, buying our Sponges direct from the Fishermen, are enabled to offer the finest selection of Honeycomb and Turkey Cups and Solids it is possible to obtain, at prices lower than any other house in the trade.

The Sponges we send out are entirely free from Sand "but not washed."

Goods ordered by post can be returned if not approved of.

Two thousand cases to select from.

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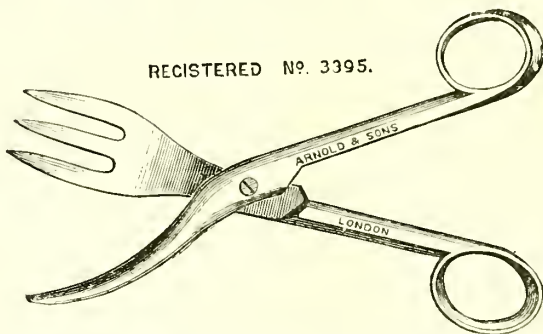
"DESIDERATUM," OR KNIFE & FORK COMBINED.

Suggested by DR. J. C. HOGAN, M.B.

PRICE:

Nickel-plated for
Right or Left
Hand,
15s.

REGISTERED NO. 3395.



PRICE:

Nickel-plated for
Right or Left
Hand,
15s.

This Instrument supplies a want long felt by those who only have the use of one hand, either from Amputation, Paralysis, Accident, or otherwise.

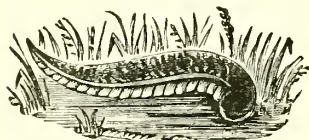
Extract from THE LANCET, March 12th, 1881 :—"The Instrument of which the enclosed is an illustration (and which I have named 'The Desideratum' for the purpose of registration) was invented by me to obviate as far as possible the awkwardness and inconvenience attendant on the eating of their meals by persons deprived of the use of either arm." Extract from the BRIT. MED. JOURNAL, March 19th, 1881 :—"It is on the principle of the shears being formed of a fork and cutting blade, which enables the person using it to divide at will and raise his or her food." Extract from the MED-PRESS AND CIRCULAR, March 16th, 1881 :—"It can be had to suit either the right or left hand, and with or without an indentation (which acts as a tooth) on the fork edge." Extract from M. D. TIMES AND GAZETTE, March 19th, 1881 :—"Messrs. Arnold & Sons, of West Smithfield, have most intelligently carried out my design."

Sole Manufacturers : **ARNOLD & SONS**, Instrument Makers,

By Appointment to Her Majesty's Government, St. Bartholomew's Hospital, and the Principal Provincial and Colonial Hospitals, &c.,

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An Upper or Lower Set, inclusive of Teeth Rubber, &c., £1 1s.

Ditto, ditto, on Platina, £2 2s.

Send for Price List.

Twenty years' experience in mechanical work.

LESSONS GIVEN IN MECHANICAL DENTISTRY.

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Delivered free in London,
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6 doz. pints 27s. per case, 5 cases
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ETHER { PURE, for Medicinal Purposes.
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LONDON, 1862.

NOTICE TO THE TRADE.

JUNE, 1881.

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PHILADELPHIA, 1876.

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ARE NOW REDUCED IN PRICE, AS BELOW:—

	per lb.		per lb.		per lb.
Ext. Cassie	9/6	Ext. Rezeda	9/6	Ext. Tubereuse	9/6
„ Jasmin	9/6	„ Rondeletia	8/-	„ Violet	15/-
„ Jonquil	9/6	„ Rose	9/6	„ Verbena	8/-
„ Lily of the Valley ...	9/6	„ Rose Geranium ...	9/6	„ White Rose	10/6
„ Magnolia	9/6	„ Spring Flowers ...	9/6	„ White Lilac	9/6
„ Orange Flower	9/6	„ Stephanotis	9/6	„ Wood Violet	13/6
„ Patchouli	9/6	„ Sweet Briar	9/6	„ Wild Rose	9/6
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These Extracts have always had the highest reputation; they are all of our own manufacture, are guaranteed **pure**, and of **triple strength**, and will compare favourably with any in the Trade.

N.B.—Owing to the failure of the **VIOLET** crop in 1880, however, this Extract is advanced in price, and will probably remain high for some time. Purchasers are warned against the spurious Ext. Violets already in the market.

LOW'S COMPOUND PERFUMES,

For Dilution by the Trade, are the Strongest in the Market, viz.:—

ESS. BOUQUET, JOCKEY CLUB, & FRANGIPANNI.

Price 14/- per lb.; or 13/- in Winchester Quarts.

LOW'S NURSERY SOAP.

This Soap is the result of considerable study and many experiments, the object desired being to produce a **soap** that would be **quite neutral**, and thus innocuous to the most tender skin, yet one that would lather freely, and not waste quickly away.

Price 33/- per Gross; or 11/- per doz. Boxes of 4 Tablets.

FAMILY BROWN WINDSOR SOAP,

At 60/- per cwt., Genuine, and Sweetly Perfumed.

This Soap is recommended to the Trade as the best value that can be obtained. Embossed Squares, 6 to lb., and in 14-lb Boxes.

Discount, 10 per Cent. Cash at a Month, or 5 per Cent. payable on Journey.

R. LOW, SON & HAYDON,

Perfumers, Toilet Soap Makers, and Brush Manufacturers,

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S. MAW, SON & THOMPSON'S REGISTERED

INDIARUBBER RING TEAT HOLDER,

FOR FITTING ROUND THE NECK OF FEEDING BOTTLES.

Registered January 21, 1881.

3/6

IN ONE DOZEN BOXES,

Per Doz.

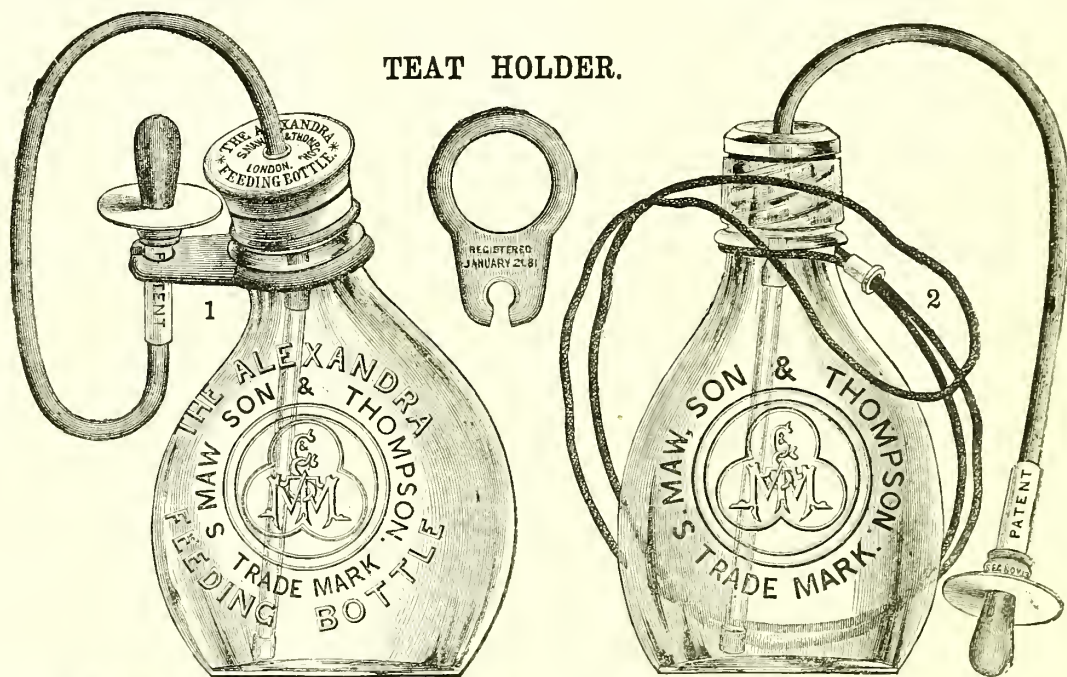
EACH IN A BOX.

3/6

Per Doz.

A useful contrivance in the feeding of Infants for holding the Teat, and preventing the Milk from dropping about. The Ring, being Elastic, can be easily slipped over the projection in the neck of the Bottle, and need not be removed.

TEAT HOLDER.



**MAW'S PATENT ALEXANDRA
FEEDING BOTTLE.**

Showing the Teat Holder.

**MAW'S PATENT EXPORT
FEEDING BOTTLE.**

Showing the Silk Cord.

SILK CORDS FOR NURSES

FOR SUSPENDING FEEDING BOTTLES ROUND THE NECK.

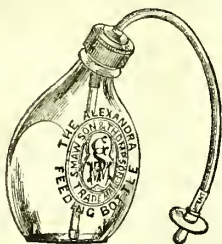
In 1-dozen Boxes, each in a Box, per dozen, **3/6**.

DIRECTIONS.—Slip the Cord over the projection in the neck of the Bottle, and tighten with the adjusting slide.

Special Quotations to Wholesale Buyers.

S. MAW, SON & THOMPSON'S

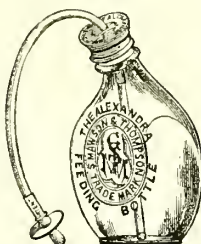
FEEDING BOTTLES.



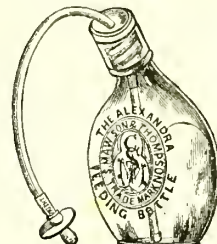
Alexandra Feeding Bottle,
Screw Metal Caps,
11/ per doz.



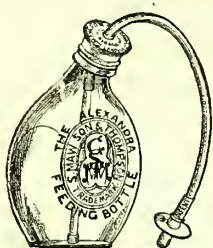
Alexandra Feeding Bottle,
Gilt Porcelain Cap,
20/ per doz.



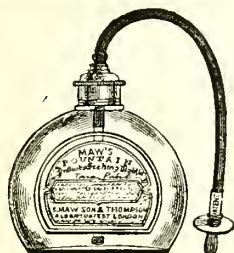
Alexandra Feeding Bottle,
Earthenware Cap,
10/ per doz.



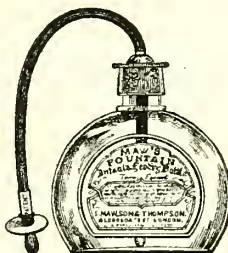
Alexandra Feeding Bottle,
Screw Glass Stopper,
10/3 per doz.



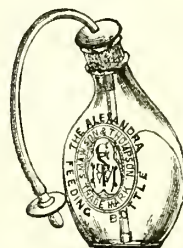
Alexandra Feeding Bottle,
Earthenware Cap,
7/6 per doz.



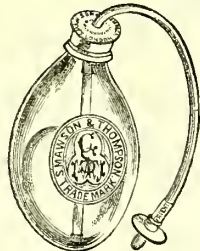
Fountain Feeding Bottle,
Pure Tin Mount,
20/ per doz.



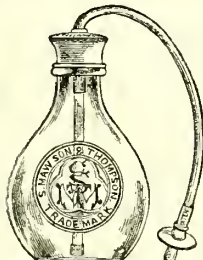
Fountain Feeding Bottle,
Pure Tin Mount,
12/ per doz.



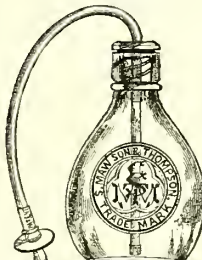
Alexandra Feeding Bottle,
Wood-Top Cork,
3/9 per doz.



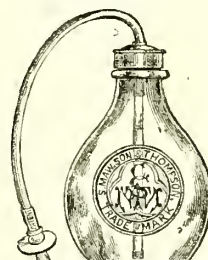
Oval Feeding Bottle;
Earthenware Cap,
7/6 per doz.



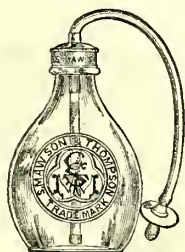
Export Feeding Bottle,
Earthenware Cap,
7/3 per doz.



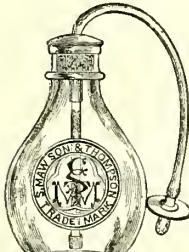
Export Feeding Bottle,
Screw Glass Stopper,
7/6 per doz.



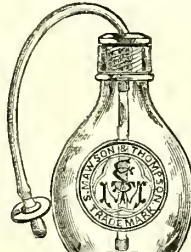
Export Feeding Bottle,
Screw Metal Cap,
8/6 per doz.



Export Feeding Bottle,
Metal Cap,
4/3 per doz.



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Wood-Top Cork,
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Export Feeding Bottle,
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Export Feeding Bottle,
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4/6 per doz.

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ON Loss of Weight, Blood-Spitting, and LUNG DISEASE. To which is now added Part VI., on the FUNCTIONS and DISORDERS of the LIVER, and their Management in accordance with the Results of Modern Discovery.

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New Catalogue One Stamp. To the Pharmaceutical Society of Great Britain.

THE

Society of Chemical Industry.

NOTICE.

THE FIRST GENERAL MEETING

OF THE ABOVE SOCIETY

Will be held (by the kind permission of the President and Council) in the

ROOMS OF THE INSTITUTION OF CIVIL ENGINEERS,
25 Gt. George St., Westminster, London, S.W.,

On Tuesday and Wednesday, the 28th and 29th inst.

THE CHAIR WILL BE TAKEN BY

PROFESSOR ROSCOE, F.R.S.,

At 11 o'clock in the forenoon of each day, and the meeting will be continued until 4 30 p.m., with an interval of half an hour, from 2 to 2 30 p.m.

The business of the Meeting will be as follows:—

A Report on the Prospects of the Society.

The President's Address.

And Papers on:—

Recent Legislation on Noxious Gases.
By E. K. MUSPRATT, Esq.

The Use of Coal Gas as a Heating Agent. By Dr. C. W. SIEMENS, F.R.S.

The Brewing of Lager-Beer. By Professor CHAS. GRAHAM.

Mechanical Furnaces. By JAMES MACTEAR, Esq.

The Patent Laws as applied to Chemical Inventions. By LUDWIG MOND, Esq.
And other Communications.

Members and their Friends will dine together at the Cannon Street Hotel on the evening of Tuesday, the 28th inst. Members desiring to attend the Dinner should make application for Tickets at once to Mr. THOS. TYRER, Garden Wharf, Battersea, London, S.W.

DINNER TICKET HALF-A-GUINEA,
exclusive of Wines.

EVENING DRESS OPTIONAL.

P.O. Orders payable to Mr. Tyrer, at Battersea Square Office.

Members having any communications to make to the Meeting are requested to send notices of the same to the Hon. General Secretary not later than the 24th inst. Applications for Membership may be sent to the undersigned,

GEORGE E. DAVIS, Hon. General Secretary,
HEATON CHAPEL, STOCKPORT.

ESTABLISHED 1842.

THE SCHOOL OF PHARMACY*Of the Pharmaceutical Society of Great Britain.*

Chemistry and Pharmacy, Prof. REDWOOD, F.I.C., &c. Botany and Materia Medica, Prof. BENTLEY, F.L.S., &c.

Practical Chemistry, Prof. ATTFIELD, F.R.S., &c. Demonstrators, Dr. SENIER, F.I.C., &c., and Mr. W. R. DUNSTAN, F.C.S.

THIRTY-NINTH SESSION, 1880-81, extending from October 1 to July 31.*Application for admission to the School, for Prospectuses, or for further information, may be made to the Professors or their Assistants in the Lecture Room or Laboratories, 17 Bloomsbury Square, London, W.C.***THE CENTRAL SCHOOL OF CHEMISTRY AND PHARMACY,**

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Teacher of Pharmacy, Botany, Materia Medica, &c., Mr. J. WOODLAND, F.C.S., F.L.S. M.P.S., &c.

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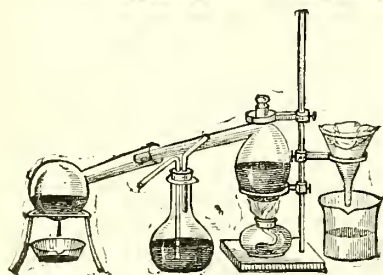
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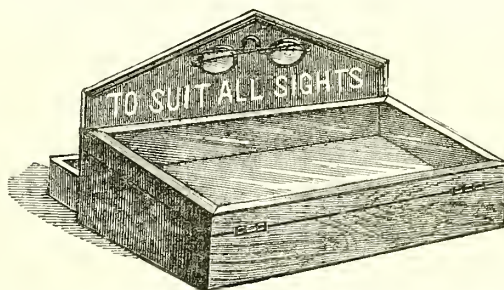
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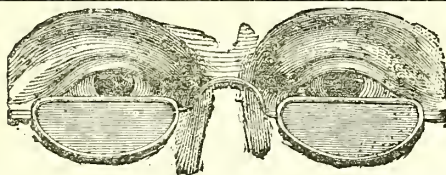


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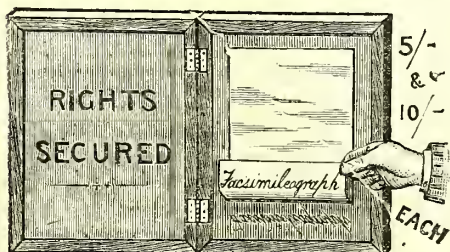
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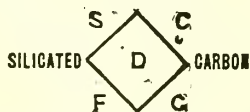
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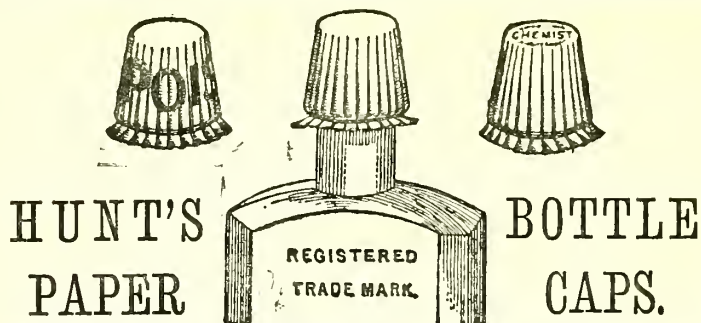
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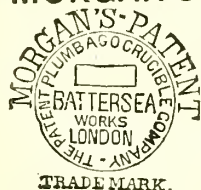
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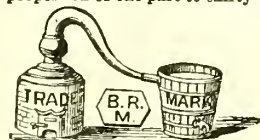
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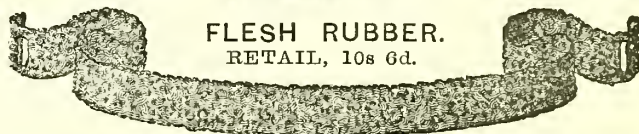
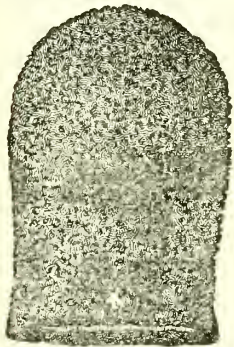
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THE ONLY EFFICIENT FLESH GLOVE AND RUBBER.

Being always absolutely Rough in hot or cold water, they are altogether unique. They cannot scratch the body, and produce a fine lather with Soap. They are manufactured from Pure India Rubber (the properties of which are peculiarly cleansing and genial to the skin), and retain their strength for many years.

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 WHOLESALE & EXPORT MANUFACTURERS.

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GENUINE Brown Arnicated Felt Corn and Bunion Plasters. SUPERIOR White Spread Felt Corn and Bunion Plasters.

FELT CHEST PROTECTORS. FELT CHEST AND LUNG PROTECTORS.

Chamois and Flannel Chest and Chest and Lung Protectors. Turkish Toilet and Bath Gloves

in all New Patterns. Bath Straps and Sponge Pads.

Waterproof Sponge Bags, Bathing Caps, Nursing Aprons, &c.

Before you Order, send for Price List. Please Note the Address.

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The formula is the property of the eminent Dr. Webster, who testifies that "during a lengthened experience" he has "never known it to prove inoperative."

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MESSRS. ORRIDGE AND CO., CHEMISTS' TRANSFER AGENTS,

May be consulted at the above address on matters of SALE, PURCHASE, and VALUATION.

Immediate attention given to Foreign Commissions.

The Business conducted by Messrs. ORRIDGE and Co. has been known as a Transfer Agency since the year 1846, and is well known to all the leading firms in the Trade.

VENDORS have the advantage of obtaining an opinion on Value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment.

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Particulars of the following will be forwarded on application—

- 1.—LONDON.—In a main thoroughfare, in a business locality, a very old-established business, entirely dispensing and good profitable trade; returns £1,200 yearly, can easily be increased; particulars on application. Price £1,250.
- 2.—LONDON, W.—Very select Dispensing business, easily increased by an energetic man; held by vendor many years, now retiring; large house, situate in high-class locality. Returns about £550. Price, lease, stock and fixtures, £550.
- 3.—LONDON, E.—Small profitable concern, situate in a thickly populated locality. Prescribing and Retail business, established 60 years; rent low, held on lease. Returns about £400 yearly; in charge of an assistant. Price about £300. Must be sold in consequence of death.
- 4.—LONDON, N.—In a main road, in a good class suburb, an established business, Dispensing and Retail, and small return from Dentistry; very convenient house, with garden. Returns about £500 yearly; price about a year's returns.
- 5.—STAFFORDSHIRE.—Situate in a good business locality, an old-established Mixed business, held by the vendor for many years (now retiring). Returns £1,500 yearly; nett profit guaranteed not less than £450 to £500 yearly. Price about £1,500.
- 6.—SURREY.—Short distance from town; good class Dispensing and Retail; good house and garden; must be sold, vendor having gone into other business. Returns £450. Offer wanted.

7.—WILTS.—In a good market town, an old-established business, at present returning between £500 and £550 yearly. Price of stock and fixtures and goodwill, £500.

8.—SUFFOLK.—First-rate market town; good house, garden, and greenhouse. Business returns about £1000 yearly, greater part cash. Price £850.

9.—ISLE OF WIGHT.—Prescribing and Retail business, situate in a favorite town. The returns amount to nearly £300 per annum; rent very low. Price £300.

10.—SOMERSET.—Death vacancy; unopposed business, situate in a pretty rural village; very little Mixed business, chiefly Prescribing and Retail. Returns £450 last year; can be increased easily. Price to be arranged, say about £350.

11.—EASTERN COUNTY.—Seaside; an old-established easily worked business, Retail and Prescribing. Returns over £500 yearly, very profitable; rent low. Price about £450.

12.—PARTNERSHIP.—Large town in Yorkshire; business returns £1,800 yearly, steadily increases. Premium required, £200, with invested capital £450—£600 in all. Full investigation permitted.

Other Businesses, Town and Country. Particulars on application.

ORRIDGE & CO., 32 Ludgate Hill, E.C.

MIDLAND COUNTIES TRANSFER AGENCY.

F. J. BRETT,

Trade Valuer and Auctioneer, Leicester.

All kinds of Chemists' Stock and Fixtures valued. Partnerships arranged. Particulars of different classes of Businesses forwarded to Buyers.

Through this Agency Businesses are disposed of quickly, and with as little publicity as possible.

Terms on application. May be consulted personally or by letter upon matters in connection with the Trade *entirely free of charge.*

NORTHUMBERLAND.—Mixed Drug and Grocery Village Trade; established 14 years; returns, £2,400; stock and fixtures, £375; goodwill, £75.

THE PATENT RIGHT and property of a well-known Proprietary Article, having a sale now of £2,600 per annum; capital required, £3,000.

NORTH-WEST.—Leading first-class Retail and Dispensing; price about £800 to £900.

BRADFORD.—Retail and Prescribing Trade with own Proprietary Articles; returns, now under management, £9 per week, and capable of increase; at valuation, about £210.

LONDON.—City; Retail, Prescribing, and Dispensing; present returns, £430; price £500.

YORKS.—Village Trade, returning £600; rent, £22; Retail and Prescribing; at valuation, about £250.

EASTERN COUNTIES.—Good class Country Retail, returning about £1,000; established 100 years; desirable residence, with garden, greenhouse, stabling, &c.; on lease, 19 years; price about £850.

YORKSHIRE.—Unopposed Family Retail; population, 4,000; important works near and building; shop, plate-front, fitted in best style by Treble & Son; good house, garden, &c.; rent, £30; Gilbey's agency; returns, mostly cash, £1,200; price £850.

NORTH MIDLANDS.—Retail, Dispensing, and Prescribing Trade, all at best prices. This establishment is of considerable repute and has several well-known Proprietary articles; ill-health cause of sale; the returns exceed £2,000; the shop, &c., is elaborately fitted; price, including Proprietary articles, about £2,600.

SUSSEX.—Light Retail and Dispensing, at full prices, in Watling place; returns, £435; price about £400.

CORNWALL.—Good class Retail and Family Trade, principally ready money, and capable of increase; best position in good market town; returns, £547.

STAFFS.—An opportunity occurs for succeeding to an Old-established Business in Staffs, vendor taking a country trade; lease will be transferred; fixtures are valued at £170; buyer can take just what stock he desires, rest will be removed.

BY VIRTUE OF BILL OF SALE.

UNRESERVED SALE BY AUCTION, at 21 BULL RING, LUDLOW, on WEDNESDAY, JUNE 29, by Mr. F. J. BRETT, of LEICESTER.—The entire fittings, fixtures, utensils, and stock-in-trade of a Chemist and Druggist, mahogany counters, nests of drawers, show cases, carboys, ointment and ext. jars, &c.; about 200 shop rounds; the entire and miscellaneous stock in good condition. Catalogues can be obtained on the premises and at the Auctioneer's offices. The Sale of Drugs will commence at 11 A.M. precisely, and the valuable Furniture Sale at 3 P.M. same day, the whole entirely without reserve.

NOTE.—The whole of these Businesses have been placed in Mr. BRETT's hands since the last issue of THE CHEMIST AND DRUGGIST. F. J. BRETT, LEICESTER.

BUSINESSES WANTED.

MEDICAL.—A Surgeon, &c., would feel thankful to any gentleman in the chemical profession to kindly inform him either of a practice for sale on very easy terms, and likely to be prosperous, or of a vacancy or opening; the purchase of a Chemist's Business, if not less than £100 yearly receipts, and suitable as basis for a surgeon, is possible. Please address, confidentially, Charles Young, Surgeon, Chilton Polden, near Bridgewater.

BUSINESSES FOR DISPOSAL.

A MEDICAL MAN wishes to dispose of his Chemist's Business; successfully carried on for 9 years; valuation about £250; increasing practice sole cause of disposal. Apply Dr. Collinson, Rotherham.

FOR DISPOSAL, a Family and Dispensing Business, in the suburbs of Newcastle; returns about £450, and might be considerably increased by attention; stock and fixtures about £200; elegantly fitted up. Address X. Y., care of Currie & Hutchinson, Wholesale Druggists, Newcastle.

TO BE DISPOSED OF, at valuation, the business carried on for over 13 years by Hugh Edgson, Chemist, 44 North Sherwood Street, Nottingham; an excellent opportunity for an energetic man; rent low. Apply Hugh Edgson, Sherwood Street, Nottingham.

GENUINE OFFER.—Profitable Cash Dispensing and Prescribing Retail; average returns, £350, with seed trade attached; good reasons for disposal; rent low; healthy district, suburbs of large town in Yorkshire. Address, M. D., 59 Hanover Street, Sheffield.

FOR IMMEDIATE DISPOSAL, the Stock of Drugs, &c., and Fixtures of a General Druggist, retiring from business; all in excellent condition; good opportunity for anyone beginning business. Address, C. Hibbert, Chemist, Market Street, New Mills.

HULL.—Light Retail and Prescribing, in one of the best suburbs; corner shop, neatly fitted; good house; low rent; last year's returns £400, which can be considerably increased by an energetic man; capital opening for anyone commencing business; part purchase-money may remain. For particulars, address W., care of T. W. Robinson, Chemist, Hull.

AN old-established Prescribing and Dispensing Business, in a large town in the North of England; average returns £600 to £700; rent £55; house portion at present sublet for £39; situate in a thickly-populated neighbourhood; price £500, or valuation. Address, W. T. C., care of Clay, Dod & Case, 52 St. Anne Street, Liverpool.

WITH IMMEDIATE POSSESSION. An old-established Business, with first-class connection; a rare opportunity for an active, intelligent, and energetic man of business habits. For particulars apply to Mr. Gibbon, Chemist, Cheltenham, who is about to retire; stock and fixtures at a valuation; no good will.

SOUTH STAFFORDSHIRE.—Immediately; a light Retail Prescribing and Dispensing Business; situated in centre of market place; returns last year £400; a large trade can be done by attention; first-class eight-roomed house, nine years' unexpired lease, rent £40; price £250 for cash. Apply F. F., care of Wyleys & Co., Coventry.

WHOLESALE DRUGGIST'S BUSINESS FOR SALE, in one of the principal cities in the Australian colonies, doing a large and profitable business; principals only will be treated with; capital required from £10,000 to £15,000. Apply to Messrs. Baiss Bros. & Co., 4 Jewry Street, London E.C.

MESSRS. TENCH & TAYLOR,

Chemists' and Medical Transfer Agents and Valuers,
9 WALBROOK, LONDON, E.C.,

Have the following Businesses for Disposal:—

1. PARTNERSHIP.—Wanted, a Gentleman to take half or fourth share in a bona fide Chemist's Business, returning £15,000 per annum; net profits about £3,000. Applicants furnishing satisfactory references can have full particulars of same.
 2. KENT (near London).—Good General Retail and Prescribing Business; large and handsome shop, well stocked; returns about £780, at full prices; good house; price £500.
 3. LONDON, N.E.—Retail, Dispensing, and Prescribing Business; established 7 years; returns, £47 weekly; price £1,050.
 4. A GOOD PROPRIETARY ARTICLE, at present returning £2,600 per annum; capital required, £7,000; or Partnership would be entertained.
 5. LANCASHIRE.—A Genuine Prescribing and Dispensing Business, returning between £8 and £10 weekly; price £200, or valuation.
 6. NORTHERN COUNTIES.—A select Light Retail and Dispensing Business; returns average over £500 per annum; price £250, or valuation.
 7. SOMERSET.—Retail, Prescribing, and Dispensing Business; average returns last 3 years over £300; price £250.
 8. LONDON, N.W.—General Retail and Prescribing Business, now returning £6 weekly under management; price £250, or any reasonable offer. This is an exceptional good opportunity for a Surgery or Dispensary.
 9. DERBYSHIRE (large town).—Very profitable Mixed Business, returning over £650 per annum; 5-roomed house, with garden; rent £36; price £185, or valuation.
 10. IN A GOOD CLASS and improving suburb of London, a profitable Light Retail, Dispensing, and Prescribing Business, capable of great improvement; present returns over £450; price to an immediate purchaser, £250; good house, held on long lease at a low rent; satisfactory reasons for disposal.
- Messrs. T. & T. have a long list of Businesses (both Town and Country) for Disposal, ranging in price from £100 to £2,000. Their PRINTED REGISTER, giving details, will be sent post free on application. No commission charged to purchasers. Preliminary inquiries by vendors answered, and a registration made of Businesses for Disposal free of charge.
- N.B.—Appointments for Valuations should be made (if possible) at least seven days beforehand.

MR. TRIPPIER, Medical Agent and Valuer, 79 ISLINGTON, LIVERPOOL.

FOR TRANSFER.

LN a populous district, 12 miles from Liverpool, established 10 years, handsomely-fitted Shop, doing a good ready-money trade; easy rent; will be sold cheap.

EAST LANCASHIRE.—Established 30 years; a profitable Light Retail Business; the proprietor, having a wholesale business attached, wishes to dispose of the retail portion, or would take a partner with a view of extending the concern; a gentleman with capital would find this a good investment.

MANCHESTER.—Suburbs, a Prescribing and Light Retail Business; ready money and profitable; small goodwill and valuation.

YORKS.—A very old-established Retail and Prescribing Business, returning £10 per week; expenses light; to be sold cheap.

ANOTHER; established 10 years; returning £400 per annum in Prescribing and General Retail; price, £200.

LIVERPOOL.—Established 30 years; Family, Dispensing, and Light Retail; neatly fitted shop; convenient premises; upon easy terms.

ANOTHER.—Estd. 25 years; good thoroughfare; Prescribing and Light Retail; corner shop; easy rent; price £150.

ANOTHER.—Dispensing and Prescribing Business; corner shop, good position; established 30 years; compact house at low rent; price, £150.

ANOTHER.—An old-established Dispensing and Medical Business, situate in a very central position, on moderate rent. **F**AMILY and Dispensing Business in a rising suburb, 6 miles from Liverpool; corner shop; large premises; established 10 years; at very low rent; part purchase money can remain at interest. **No Commission is charged to Purchasers.**

All information on application. To facilitate matters, reference required on parties applying for the first time.
Lists of Stock for Appraisement receive immediate attention.

R. TOMLINSON,

5 ST. PAUL'S SQUARE, BIRMINGHAM,

HAS TO OFFER:—

WOLVERHAMPTON.—A genuine Mixed Drug Business (chiefly light trade), in a populous thoroughfare; returns last year, under management, £546; rent, £25; has returned under principal £800.

MIDLANDS.—A Shop ready fitted for about £70; established about 8 years; about 6,000 inhabitants around the shop, which is nicely fitted.

WOLVERHAMPTON.—Business in suburb; light trade; rent, £20; returns, by assistant, £350; nice house and garden; price about £200.

FITTINGS for a small Shop; about £30.

BUSINESSES FOR DISPOSAL (Cont.).

GOOD OPPORTUNITY for Young Man; an Old-established Retail and Dispensing Business; well-fitted shop; large premises; average returns, under management, over £500; proprietor having other engagements sole reason for disposal; price £300, or valuation. Address, R. J., care of Clarke, Bleasdale & Co., York.

A GENUINE Old-established Retail and Prescribing Business, in a good Market Town; situation first-class; double plate-glass front; house, 10 rooms; rent £60; rates low; profits very good; several proprietary articles; returns nearly £1,000; incoming about £900. Address, "Chemist," care of Messrs. Sanger & Sons, 150 Oxford Street, London.

FOR EARLY DISPOSAL, a first class light Dispensing Business in a fashionable watering-place in the North of England; shop very neatly fitted and well stocked; proprietor leaving the business; price including stock, fixtures, and goodwill, £600; rent £35 (14 years' lease); full prices. Address, W. T. C., care of Clay, Dod & Case, 53 St. Anne Street, Liverpool.

S MALL BUSINESS; established nearly thirty years; in the centre of a thickly populated mining district in South Staffordshire; no opposition; lease 7½ years unexpired; rent £16 per annum; coming in low; to a young man with small capital this is an excellent opportunity. For particulars apply to R., care of H. A. Moore, 112 High Street, Brierley Hill.

AN OLD-ESTABLISHED DRUG, Dysaltery, Oil, Paint, and Colour Business, in a large manufacturing and seaport town in the North of England; good house and shop, at a low rent; satisfactory reasons will be given for disposal; every facility given for a full investigation; a local wholesale as well as retail has been done; stock at valuation, about £1,600. Apply, R. S., care of Evans, Sons & Co., Liverpool.

MIDLANDS.—Light Retail Dispensing and Prescribing, in pretty village of 2,000 inhabitants; present returns about £400, and can be doubled by cultivation of agricultural trade; no patents; Gilbey's Agency can be added, as vendor is leaving the trade; easy terms can be had; good house and garden; rent £25; close to rail; price £250—£100 cash, £100 in bills. "Midland," Office of THE CHEMIST AND DRUGGIST, 41A Cannon Street.

LANCASHIRE COAST.—An old-established first class Retail and Dispensing Business; beautifully fitted and well stocked; best position in the town; proprietor leaving the country; average takings for the last 8 years over £1,300; property in hold, can be bought if required; price £300, and valuation; full particulars to bona fide purchasers only; full prices. Address, W. T. C., care of Clay, Dod & Case, 53 St. Anne Street, Liverpool.

TO CHEMISTS AND DRUGGISTS.—To be Disposed of, an old-established business in the midland counties; the returns last year were nearly £2,400, including the sale of a proprietary article, but during the life of the late proprietor were considerably more; the premises are extensive, with a good garden, and held at a low rent, the lease, which has 14 years' unexpired, would be transferred. For further particulars apply by letter to Langton, Edden, Hicks & Clarke, 230 Upper Thames Street, London.

TO BE SOLD, by Private Contract, the Old-established Business of R. T. Watson, Pharmaceutical Chemist, Wine and Spirit Merchant, 63 Ormonde Street, Jarrow; the above business has been very successfully carried on for the last 22 years; no one need apply except they can command substantial capital. For further particulars apply to Langton, Edden, Hicks & Clarke, Maw, Son & Thompson, London; Southall Bros. & Farclay, Birmingham; John Ismay & Sons, Newcastle-on-Tyne.

MANCHESTER.—For immediate Disposal, a ready-money Chemist's Business, with oil, paints, &c. (dentistry could be added to advantage); established 10 years; is situated in the midst of thickly-populated district; substantial fixtures; several proprietary articles; capital opportunity for one wishing to do little wholesale, as premises are large and roomy; moderate rent; stock, fixtures, &c., a bargain; good reasons for leaving. Address W. W. M., 23 Rosamond Street, Renshaw Street, Hulme, Manchester.

PARTNERSHIP.

AN old-established Wholesale Druggist and Drysalter is in want of a Partner with capital of about £1,500; or the Business might be purchased, if desired, a thorough introduction being given by owner. Apply to Thos. Tomlinson & Son, Commercial Agents, 41 Corporation Street, Manchester.

EMPLOYERS WANTING ASSISTANTS.

IMEDIATELY; as Junior or Improver in good-class country business; no Sunday duty. Apply, stating age, height, salary required, and reference to A. Smart, Pharmaceutical Chemist, Steyning.

JUNIOR ASSISTANT; for a Mixed Business; one that can be well recommended. Apply, stating age, salary, and references, J. H. Bowling, Chemist, Pembroke Dock.

AN ASSISTANT, speaking French, and having a knowledge of French Pharmacy. Address or apply to Schouwer, Chemist, Princes Street, Haver Square, London.

WANTED AT ONCE, an Assistant, about 22, for the Summer months. Address, stating references and salary required, W. G. Clark, South Lowestoft.

JUNIOR ASSISTANT Wanted; one who has been accustomed to the Post Office and understands the single needle. Send carte, references, salary required, height, age, &c., to "Manager," 50 Queen's Road, Brighton.

WANTED, an Assistant in a General Retail Business, aged about 24 years; must be steady, active, and obliging, with good references. Apply to Chas. H. Ridley, Wholesale Druggist, Maidstone.

INVOICE CLERK for London Wholesale Drug Trade; previous experience necessary. Address, X. X., 14 Deacon's Advertising Offices, 154 Leadenhall Street, E.C.

A WELL-EDUCATED YOUTH as an Apprentice; must have passed the preliminary examination; every opportunity for thoroughly learning the business, and a comfortable home. Apply to Robert G. Gould, Chemist, Audeover.

WANTED FOR WEST INDIES, qualified Assistant Chemist and Druggist. Must have passed Exams.; salary £70, £85, £100, &c., with board and lodgings; steamer passage paid out. Apply P., care of Gilbert and Field, Gracechurch Street.

CHEMICAL TRADE.—Wanted a Junior Clerk, accustomed to this or the drug trade. Apply by letter only, stating age, experience, and salary required, to W. D., care of Messrs. Wilson & Whitworth, Broadway, Stratford, E.

FOR a Leading Business in an Inland Watering-place, a qualified Assistant where three are kept; must have a thorough acquaintance with select trade. Address, stating age, height, salary required, and giving references, Y. K., care of Messrs. Hodgkinson, 74 Golden Lane, E.C.

WANTED, at once, a Junior, or one just out of his time; must be quick and neat; duties principally dispensing and keeping up stock; must not object to assist generally; no Sunday duty. Send references, salary, and usual particulars, with carte (to be returned), to C. F. Smart, Chemist and Stationer, Littlehampton.

ASSISTANTS WANTING SITUATIONS.

MR. SMITH, 1 King Street, Dover, Chemists' Confidential Manager; accustomed to country town business.

JUNIOR, in London or suburbs; aged 20; over 4 years' experience. X., care of Mr. Lewis, Chemist, St. Albans.

WHOLESALE, LOCUM TENENS, MANAGER. For particulars, apply Mr. W. H. Gould, 13 Saxe Coburg Street, Leicester.

WANTED, Situation as Light Porter, or to Assist in Warehouse; aged 19 years. Apply, J. R. Foster, 5 Kidgate, Louth.

TO SURGEONS OR CHEMISTS.—As Dispenser; aged 23; 7 years' experience. "Alpha," 1 Duke Street, Cardiff.

JUNIOR; 4 years' experience; satisfactory reference. F., 17 Market Place, Norwich.

WHOLESALE.—Young Man, aged 20, wants Situation as Warehouseman or Wet Counterman. Address, D. M., Munlochy, N.B.

WANTED, a SITUATION as MANAGER; West-end experience; age 40; single. Address, A. P. S., 4 Stratford Road, Kensington, W.

AS TEMPORARY ASSISTANT or Manager; many years' experience in London and country; first-class references; disengaged. "Chemist," Milton Villa, Shaftesbury Road, East Hammersmith, W.

TO WHOLESALE DRUGGISTS, Patent Medicine Dealers, or Sundrymen. Wanted, re-engagement as Traveller. Address, N. W. Simons, Nailsea, Bristol.

AS ASSISTANT; age 28; 12 years' experience; minor qualification; steady, obliging, industrious; 34 years last situation; good reference; permanency desired. W. R. Gossling, Wimborne.

TO CHEMISTS.—Wanted, an appointment by a Chemist's Assistant; well up in Dispensing and Prescribing; satisfactory reference. A. T., 113 Victoria Park Road.

TEMPORARY as Locum Tenens, by the week, month, or otherwise, in town or country, by a Registered Chemist; unexceptionable references. C. S., 30 Robinson's Road, Approach Road, near Victoria Park, E.

AS LOCUM TENENS; disengaged early in July; unquestionable references. Address, "Manager," Fox & Co., 3 Market Place, Harrow Green, Leytonstone.

MR. A. K. TAYLOR, Temporary Manager, has removed to 23 Orpington Road, Hornsey Road, N., where all letters, &c., are to be addressed. Terms as before; references forwarded.

AS JUNIOR in a good Retail and Dispensing establishment; 5 years' experience; salary £50 (outdoor); highest references. 40/15, Office of THE CHEMIST AND DRUGGIST, 44A Cannon Street.

A YOUTH, who has had four years' experience with a Chemist, desires a situation with a Chemist and Grocer; small salary; good reference. A. Johnson, The Pharmacy, Whitstable.

WANTED about beginning of August.—Advertiser, aged 28, requires a Situation as Manager of Branch, or as Senior (out-door); 13 years' experience; excellent references; 4½ years in present berth, in good West-end business. Address, "Mephisto," 169 Edgware Road, London.

NO SALARY.—A Young Man, with Minor qualifications, desires Situation from this date up to November 18th, to learn Neat Dispensing and General Retail; services given in return for board, lodgings, and washing. Address, James Stephen, Jun., Protstonsill, Banff, N.B.

ADVERTISER (aged 30) seeks engagement as Traveller, Assistant, or Warehouseman, or would act as Agent for good house; no objection to going abroad; 10 years in present situation. Address H. H., 178 St.

MISCELLANEOUS.

THE MIDDLESEX HOSPITAL, W.

ASSISTANT DISPENSER REQUIRED.—Candidate must be Associate of the Pharmaceutical Society; salary £80, with prospect of increase. Applications and testimonials to be sent in to me on or before June 20th.

June 9th, 1881. R. Leeson, Secretary-Superintendent.

In the Matter of the Companies Acts, 1862 and 1867, and In the Matter of the Chemists and Druggists' Association, Limited,

THE CREDITORS of the above-named Company are required, on or before the 1st day of JULY, 1881, to send their Names and Addresses, and the particulars of their Debts or Claims to the undersigned, the Solicitors of F. GANE, the Liquidator, and if so required by notice in writing, to come in and prove their said Debts or Claims at such place and such time as shall be specified in such notice, or in default thereof they will be excluded from the benefit of any distribution made before such debts are proved.

Dated this 8th day of June, 1881.

ALFRED HICKS & ARNOLD,

28 Wellington Street, Strand,

Solicitors to the Liquidator.

DRUGS.—AGENT WANTED.—An old and highly respectable Messina (Italy) Firm is desirous of appointing an Agent in London (German preferred) to solicit orders in "Essences," from Druggists. None need apply unless well connected amongst the trade, and has been for several years past in the drug agency line, or broker, and can give good references as to respectability. Address Z. Z., care of Giulio Andreis, Messina.

THE FRANCES FEEDING BOTTLE.

G. WELLS'S Patent for Regulating the Flow of Food. Price 2s. 6d. Agents required in all provincial towns. For Terms, &c., apply to the Patentee, Mr. George Wells, 12 North Street, Smith Square, Westminster, London, S.W.

PEARL-COATED PILL AND MEDICATED LOZENGE MANUFACTORY.—In consequence of retirement of Senior Partner, a well stocked and fitted Warehouse, London, N., now in full work, and trading with the Stores, Chemists, Surgeons, &c., at good profits, the Plant, Stock, Fixtures, &c., for immediate Sale, price £500. Mr. Rutter, 2 Greyhound Road, Fulham, London, S.W.

SMALL CORKS 1d. per Gross, larger sizes in proportion. These Corks are the solid portion of the Patent Hollow Corks cut by Machinery for the Aire and Calder Glass Bottle Company's Patent Stoppers.

83 UPPER THAMES STREET.

JAMES C. CHUBB

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BEST SEIDLITZ POWDERS.

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Turco Sponge Gloves, No. 4, C quality (thin white, large, with red binding)	4/0
Eden Sponge Gloves, No. 1, or Turkish (best white, extra stout quality, large)	5/0
Eden Sponge Gloves, No. 2, or Turkish (best white, extra stout quality, medium and small)	4/6
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Empress Sponge Gloves (crisp, white, with fancy stripes)	5/0
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Eden Flesh Gloves, or Calefacio, No. 2 (hard brown)	6/0
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Bath Belts or Straps (various sorts)	8/0 to 11/0 „

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APPLICATIONS FOR AGENCIES INVITED.

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June 15, 1881.

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FROM NEW ZEALAND.

UNSOLICITED TESTIMONIAL TO

MR. N. G. WILCOCKS,
SODA WATER MACHINIST,
BACK STREET, BATH.

From THOMSON & CO.,

Steam Aërated Water Works,
BOND AND CRAWFORD STREETS, DUNEDIN;
CHELMER STREET, OMARU; and
SPIT, NAPIER.

To Mr. N. G. WILCOCKS.

Engineer,
BATH.

March 25th, 1881.

"Dear Sir,—We wish to convey to you, unsolicited, our appreciation and entire satisfaction with the Double Soda Water Pumps (large size) made by you and forwarded to us by Edgar Biffitt & Co., London and Yorkshire. These reached Dunedin, per ship 'Zealandia,' in 1880, in splendid order and condition. We have had them working constantly six or seven months now, and for cheapness, durability and finish, combined with their strong carbonating power, we have seen nothing to equal them in 20 years' practical experience.

"We are, dear Sir, yours faithfully,

"THOMSON & CO."

Mr. Wilcocks can give numerous references to Pharmaceutical Chemists and others (which are kindly permitted) who use his make Machines, and will forward his Illustrated Price List, post free, on application.

Steam Engine and Boiler supplied for SOUTH AFRICA.

London, May, 1881.

Dear Sir,—We are glad to inform you that the Steam Engine and Boiler, shipped by us to the Cape, in December last, still works well. Our client, in a letter just to hand, writes:—"You will be pleased to hear that the little Engine is still working beautifully; it is certainly a vast improvement on the hand power."

Faithfully yours,

BURGOYNE, BURBIDGES, CYRIAX & FARRIES.

To Mr. N. G. Wilcocks, Engineer, Bath. *pro J. W. J. B.*

Emmanuel Street, Cambridge, May, 1880.

Dear Sir,—We have been using your "Eclipse" Filling Machine this week. We find that it can fill the bottles very well.—Yours faithfully,
Mr. Wilcocks, Bath. I. LAMBERT.

Anerley Road, Norwood, S.E., London, April 16th, 1881.

Dear Sir,—I have now had your Machinery in use for over six months, and as far as I can judge from workmanship is equal to the London makers, and at least 20 per cent. less in cost. I shall be pleased to show my plant to anyone you like to refer to me.

Yours faithfully,

Mr. N. G. Wilcocks, Bath.

J. G. PREBBLE, Chemist.

By Appointment.—W. E. STOKES, Chemist, Brompton, Kent,
Established 1812, April, 1881.

"Eclipse" Soda Filling Machine to hand, have tried it in two or three different Patent Bottles, and appears to answer admirably well.

Bell Street, off Pole Street.

From James Lund's Aërated and Mineral Water Manufactory.
Dear Sir,—I have the pleasure to inform you that the Boiler, Engine and Soda Water Machinery, &c., I got from you give me every satisfaction, it works excellently and turns out first-class Aërated and Mineral Waters.

To Mr. N. G. Wilcocks,

Yours truly,

Soda Water Machinist, Bath.

JAMES LUND.

CARDED

FREE FROM SAND.

SELECTED PIECES.



SPONGE.

NO LOSS OR WASTE.

COMMANDING A READY SALE.

HONEYCOMB	8d.	1/4	2/-	2/8	4/-	8/-	12/-	16/-	20/-	28/-	40/-	doz.
To Sell at	1d.	2d.	3d.	4d.	6d.	1/-	1/6	2/-	2/6	3/6	5/-	each.
TURKEY	2/8	4/-	8/-	12/-	16/-	20/-	28/-	40/-	doz.			
To Sell at	4d.	6d.	1/-	1/6	2/-	2/6	3/6	5/-	each.			

10 PER CENT. FOR PROMPT CASH.

INSECT POWDER (Best Dalmatian) ...	per lb.	3/-
Ditto ditto in Sprinkling bottles ...	per doz.	4/-
Ditto ditto in Tin Apparatus, with Piston		7/6
INSECT POWDER BOXES—TIN ...	Penny size, per gross	29
Ditto ditto ...	Threepenny do. ditto	5/-
Ditto ditto ...	Sixpenny do. ditto	8/-
Insect Powder Boxes, Paper, with } Per gross	2/6 3/6 5/- 8- 10/-	
Perforated Zinc Tops ... }	1d. 3d. 4d. 6d. 1s. size.	

N.B.—We shall be pleased to hear from any Chemists in any town not visited by our Travellers, so that if possible they may have an opportunity of looking through our Sample Cases, which contain a choice variety of many saleable novelties.

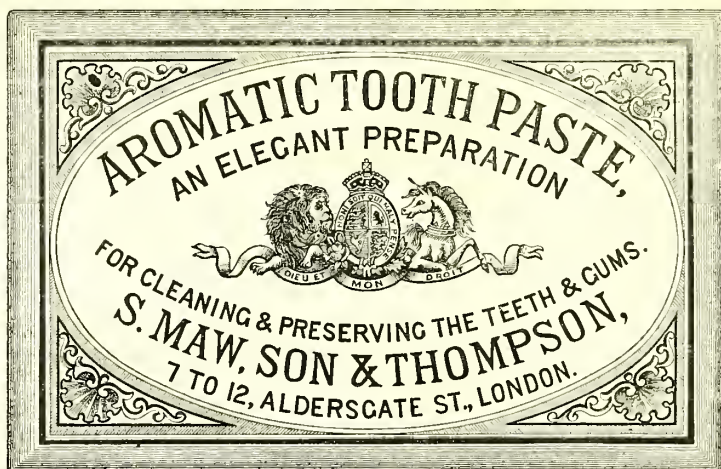
BOURNE & TAYLOR

(BOURNE, JOHNSON & LATIMER),

35 CASTLE STREET, HOLBORN, LONDON, E.C.

FAC-SIMILE OF LABEL.

IN COVERED JARS.



BURNT-IN LABELS.

Price to the Trade, 12s. per dozen. Usual Discount.

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Duncan, Flockhart & Co. ... EDINBURGH.
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SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

GREENSILL'S FAR-FAMED MONA BOUQUET

THE ORIGINAL AND ONLY GENUINE.

The great popularity of this exquisite Perfume is a proof of its excellence and superior qualities.

T. S. GREENSILL, Chemist, Douglas, Isle of Man, Inventor, Proprietor, and Maker.

AGENTS—LONDON: Sanger; Maw; Edwards; Newbery; Mather; Barclay; Whittaker & Grossmith; Hovenden; Parton & Osborne; Butler & Crispe; Tidman & Son; Barron & Squire; Wright, Layman & Umney; Jno. Thompson; Burgoyne, Burdidge & Co.; Grimwade, Ridley & Co.; Baiss Brothers. LIVERPOOL: Evans, Sons & Co.; Clay, Dod & Case; E. Sumner & Co.; Raines & Co. MANCHESTER: J. Woolley; Lynch & Bateman; Jewsbury & Brown; Mather. EDINBURGH: Duncan & Flockhart. DUBLIN: M'Master; Hodgson. YORK: Sutcliffe & Headley; Clark, Bleasdale. THIRSK: Wm. Foggitt. BRISTOL: Ferris & Co. LEEDS: Goodhall & Backhouse. BIRMINGHAM: Churchill & Son; P. Harris & Co.; Parton & Osborne; Southall Bros. & Barclay.

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Introduced in 1852.

Registered Trade Mark—"Tower of Refuge, Douglas Bay."

Dr. C. R. Coffin's AMERICAN DENTIFRICE.

Prepared only by WILLIAM DARLING, Chemist, Manchester. May be had from S. Maw, Son, & Thompson; Barclay & Sons; F. Newbery & Sons; Sanger & Sons; and any Wholesale House in London. Price 2s. per Box, and Family Jars 10s. each.

OKELL'S ORIGINAL MONA BOUQUET

Retail, 1/1, 1/9, and 3/6; Wholesale, 9/1, 15/1, and 30/1 per doz.

This much-admired Perfume (prepared by the Widow of the late Joseph Okell), may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Applications for WHOLESALE Agencies to be made to the SOLE CONSIGNEE, THOMAS WEST, Chemist, Stretford, Manchester.

GOLDEN HAIR.

ROBARE'S AUREOLINE

Produces, by two or three applications, the beautiful golden colour so much admired.

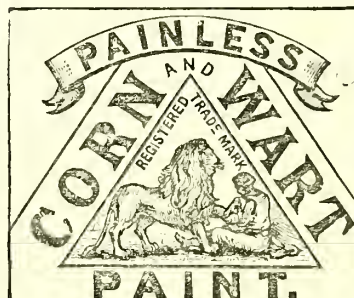
WARRANTED PERFECTLY HARMLESS.

Price, 5s. 6d. and 10s. 6d., of all Perfumers and Chemists.

WHOLESALE—

R. HOVENDEN & SONS,

5 Great Marlborough Street, W., and 93 and 95 City Road, E.C., London.



PREPARED BY

J. HARGREAVES & SON, Chemists, PRESTON.

WHOLESALE AGENTS.—London: Burgoyne, Burdidge & Co., Coleman Street; Messrs. Barclay & Sons, Farringdon Street; Mr. H. C. Mason, Australian Avenue, York; Messrs. Clarke, Bleasdale, Bell & Co., Liverpool; Messrs. Ayrton & Saunders, Duke Street, South Norwood; Messrs. Cullen & Co., Blackpool; Mr. J. Jackson, Talbot Road, Manchester; Whitehead, Holbrook & Co., New Brown Street, Stockport; Kay Brothers, and most Wholesale Druggists.

PAINLESS CORN AND WART PAINT, contains no Arsenic or any Injurious Ingredient. This preparation has the advantage over similar preparations in being quite Painless. It is an entirely new mixture, and though only discovered quite recently, it already commands a large sale, and is rapidly superseding all similar preparations. Testimonials received from most respectable firms.

DIRECTIONS FOR USE.—Apply a thick coating of the Paint, and allow it to remain for 6 or 7 days; then detach the destroyed Corn (or Wart) with the nail, or a dull knife. In Bottles, with Camel's Hair Pencil, 6d. each, sample, by post, 6d.

ESTABLISHED 1843.

THOMPSON & CAPPER,

WHOLESALE AND EXPORT

HOMŒOPATHIC CHEMISTS,

55 Bold St., Liverpool,

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ILLUSTRATED PRICE LIST ON APPLICATION.

THOMPSON & CAPPER have now for many years, with the greatest benefit to their Agents throughout the world, supplied, *free of cost*, Books for Gratuitous Distribution, compiled by themselves, containing complete directions for using the Homœopathic Medicines, a plentiful distribution of which invariably ensures a large sale. and bills also, with name, *ad lib.*

THOMPSON & CAPPER'S**DENTIFRICE WATER.**

Sells well everywhere, its beneficent qualities being attested by physicians in all parts of the world. (See Testimonials.)

In 1s. 6d., 2s. 6d., 4s. 6d., and 8s. 6d. Bottles.

**HOMŒOPATHIC
MEDICINES**

FOR EXPORT,
Specially Secured

AGAINST

EVAPORATION.

PREPARED BY

E. GOULD & SON,

*Chemists by Appointment to the London
Homœopathic Hospital,*

HOMŒOPATHIC CHEMISTS,

59 Moorgate Street, London, E.C.

PRICE LISTS OF MEDICINES, MEDICINE CHESTS, &c.,
POST FREE TO ANY PART OF THE WORLD.

MOUNSEY'S

ORIGINAL

PRESTON**SMELLING SALTS.**

PREPARED ONLY BY HIS SUCCESSOR,

WILLIAM WILLAN,

CHEMIST,

AT THE OLD ESTABLISHMENT,

3 FRIARGATE, PRESTON.

Liberal Terms to Shippers and Large Buyers. Usual Trade Discount.

The Trade should see that the name of "Mounsey" is on the bottles, and "W. Willan, late Mounsey, Chemist, Preston," on the seal which is upon every cork.

PIESSE & LUBIN

PERFUMERY MANUFACTURERS

(Parfumeurs Chimistes)

L O N D O N

DEPÔTS IN ALL THE PRINCIPAL CITIES OF THE WORLD

FLOWER FARMS
AT
MITCHAM SURREY



TRADE MARK :—MUSK DEER

FLOWER FARMS
AT
NICE AND GRASSE

CONCENTRATED



ESSENCES

Lign Aloe
Psidium
Opopanax
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White Rose
Jockey Club
Ess Bouquet
Rondeletia
Musk
New Mown Hay
Cedrat
Ilang-Ilang
Heliotrope
Meadow Queen

Ipomœa
Wood Violet
Jasmin
Verbena
Australian Wattle
Lilac
Rezeda
Geranium
Stephanotis
Orange Blossom
Patchouly
Tuberose
Hyacinth
Kiss me Quick

Gardenia
Doing the Block
Ace of Hearts
Last Kiss
No one to Love
Right Bower
Lavender
Virgin's Bower
First Love
Kiss Me if you Dare
Think of Me
Kiss Me Sweetly
Piesse's Posy
Mizpah

Be Mine
Kiss Me, Love, again
Never Forgotten
Ask Mamma
Spring Flowers
Millefleurs
Stolen Kisses
Box his Ears
Excelsior
Helionde
La Duchesse
Jolly Dog
Queen's Favourite
Maréchale

AND A THOUSAND OTHERS

RIBBON OF BRUGES—for sweet fumigation

ALPACA POMADE—in half-pound jars

PESTACHIO NUT TOILET POWDER.—Brownness of the Neck or Arms, undue Redness of the Face and Hands, are obviated by one application of this exquisite discovery. It represses the unpleasantness of sensible perspiration and its disagreeable accompaniments

INK SOLVENT—removes Ink or Iron mould from paper, linen, or the skin, by merely wetting the stains with the solvent

EGG JULEP, or NURSERY HAIR WASH.—This Julep may be used with confidence as an excellent cleanser of the head. Half-pints

COLOGNE DENTIFRICE—prepared from the flowers from which EAU DE COLOGNE is distilled

PESTACHIO NUT OIL.—"The beauty of the Raven Tresses of the Spanish Ladies has excited the admiration of every visitor to Madrid. No other hair-dressing is used but the Oil of Pestachio Nuts"

THE BEST ARTICLES & THE BEST TERMS IN THE TRADE
Full Particulars on application

MAW'S PERFUMERY,

Elegantly Labelled,

AND OF

SUPERIOR QUALITY.

MAW'S PERFUMES, in $\frac{1}{4}$ -dozen Boxes each, or assorted.

ESS. BOUQUET, FRANGIPANNI, JOCKEY CLUB,
MAGNOLIA, MILLEFLEURS, RONDELETIA, SPRING
FLOWERS, STEPHANOTIS, WHITE ROSE, YLANGYLANG.

Corked	...	...	...	...	...	per doz.	7/6 & 12/-
Do. with Sprinklers	...	...	...	...	..	"	8/- & 12/6
Stoppered	...	...	...	...	...	"	12/-

MAW'S PERFUMES (Superior), in Stoppered Bottles and
 $\frac{1}{4}$ -dozen Boxes.

KNITTED SWEETS	...	...	...	...	per doz.	16/-
ORCHID FLOWERS (CATTLEYA, MAXILLARIA, STANHOPIA) each, or assorted	...	...	...	...	per doz.	16/-

MAW'S PERFUMES (Super Quality), corked, in $\frac{1}{4}$ -doz. Boxes.

ESS. BOUQUET	...	...	...	...	per doz.	12/-
WHITE ROSE	...	...	...	...	"	12/-

10 per Cent. off Invoice, and 5 off Monthly Account.

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

S. MAW, SON & THOMPSON, London.

MAW'S SUPERIOR VIOLET POWDER & TOILET POWDER,

IN ROUND-SHOULDERED BOXES, HANDSOMELY LABELLED,

3s. 9d. per Dozen.

Packed in Outer Boxes of Half-a-Dozen.

10 per Cent. off Invoice, and 5 off Monthly Account.

S. MAW, SON & THOMPSON, LONDON.

EACH CASE BEARS TRADE MARK,



WITHOUT WHICH NONE ARE GENUINE.

S. MAW, SON & THOMPSON'S INDELIBLE MARKING INK.

The Bottles well filled, the Article well got up, and the Quality guaranteed.

6d.	Size in 1 dozen Boxes	...	...	...	...	3s. 0d. per dozen.
1s. 0d.	" in $\frac{1}{2}$ "	...	...	...	...	6s. 0d. "
6d.	" in Linen Stretchers	...	...	...	...	4s. 0d. "
1s. 0d.	" in " "	...	...	...	...	7s. 6d. "
2s. 6d.	" in Leather Cases	...	...	...	...	18s. 0d. "

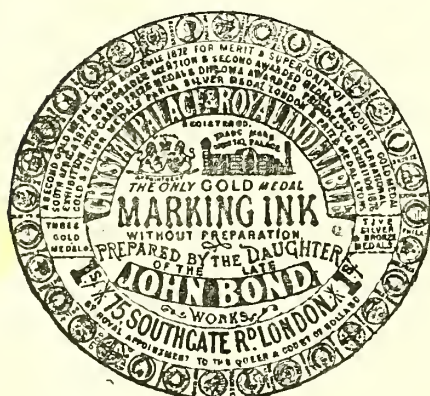
10 per cent. off Invoice, and 5 per cent. Cash Monthly.

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

S. MAW, SON & THOMPSON, LONDON.

GIVEN AWAY

With every HALF DOZEN of



BOND'S CRYSTAL PALACE GOLD MEDAL MARKING INK

(Prepared by the Daughter of the Late John Bond),

A Handsome GOLD Show Card or Transparent Lid Box.

MY WHOLESALE TRADE TERMS ARE—

30/ Gross for 6d. Plain; 60/ Gross for 1/ Plain; 36/ Gross for 6d. Pedestals;

72/ Gross for 1/ Pedestals.

Order at once on the New Show Card, which is portable, and so constructed that it can be either suspended in the Window or used as a Counter Card. Quite a Novelty.

FIRST AWARD MELBOURNE INTERNATIONAL EXHIBITION, 1881.

This makes Three Grand Awards (Sydney, Queensland, and Melbourne) in One Year.



HOOPER'S MARKING INK



May be relied upon to give a permanent Black impression that will not wash out. Below is one of many Testimonials.



From Messrs. THRESHER & GLENNY, Hosiers to H.R.H. the Prince of Wales.

We have for many years used Hooper's Marking Ink for marking linen, &c., and can confidently say that no other ink gives us such satisfaction, or produces so black and permanent an impression without injury to the fabric.



ADVANTAGES:

It possesses in a pre-eminent degree the first essentials of any Marking Ink—Permanence and Blackness—which the experience of a quarter of a century has proved. The Ink is fluid and never dries up in the bottles, which is the case with most of the Marking Inks in use at present. When once introduced it is a source of satisfaction to the pharmacist and the customer.



Sold in 1/- Card Cases, at 5/6 per doz.; 1/- Wood Cases, 6/6 per doz.; and in 6d. Bottles, 3/- per doz.

SPECIAL TERMS FOR LARGE QUANTITIES.

May be obtained through Messrs. BARCLAY & SON; Messrs. NEWBURY & SONS, Newgate Street; Messrs. MAW & SON; Messrs. B. HOOPER & CO., London Bridge, and most of the leading Wholesale Houses; and direct from Proprietor,

24 RUSSELL STREET, COVENT GARDEN.

ESTABLISHED A.D. 1815


PHOENIX GENUINE INDELIBLE **MARKING INK**

THE LEADING & STANDARD ARTICLE

PREPARED ONLY BY THE WIDOW OF THE LATE
JOHN MURPHY
CHEMIST AT THE ORIGINAL ESTABLISHMENT
11, NILE STREET, EAST ROAD, HOXTON, N.

THE ORIGINAL TRADE MARK. Estab^d 1815.

NO OTHER ADDRESS — BEWARE OF WORTHLESS IMITATIONS.



A E I

THE MOST PERFECT

MARKING INK,

For Writing or Stamping on Linen, Cotton, Silk, &c.

BAINBRIDGE & POUND

Strongly recommend this Ink to the Trade generally for its Permanency and Indestructibility; it requires no heat, flows freely from the pen, does not blot or run, and cannot be removed without destroying the fabric.

Sold in Bottles, 6d., 1s., 2s. 6d., 4s. 6d., 7s. 6d., & 12s. 6d. each, by all Chemists and Medicine Vendors.

WHOLESALE DEPÔT—

60 LEATHER LANE, LONDON.

A Liberal Discount to Large Buyers and Shippers.

EWENS' CLARIFIED LARD, MARROW, SUETS, AND OILS.

JAMES EWEN & Sons are induced to give further publicity to these articles, the continued demand by all who have used them being satisfactory proof "that where purity of basis" in ointments, &c., is required, they are most desirable.

By their method of purifying, the fats are not chemically altered, but simply divested of all particles tending to decomposition, they are consequently available for the most delicate preparations.

Adeps. Benz. B. P. and Pharm. Lard (*vide* P. J. Vol. I. No. 8). Direct, "for Cash only," from

JAMES EWEN & SONS' CLARIFIED FAT WORKS,
5 HATFIELD STREET, STAMFORD STREET, S.E.;

Or through any of the Wholesale Houses, with their usual credit, at a small advance.

CAUTION.—See that each package bears their label with name and weight.



SAVAR'S PROPRIETARY SPECIALITIES.



SAVAR'S ANIMAL SOAP (NON-POISONOUS).

For Washing Dogs and other Domestic Animals. 6d. Packets; 8s. 9d. doz.

SAVAR'S BREAST EXHAUSTERS.

Fitted with the Latest Improvements. 1s. each; 7s. 6d. and 8s. 6d. per doz.

SAVAR'S CAMPHOR CASKETS.

Prevent Infection and relieve Catarrh. 6d. and 9d. each; 3s. 6d. and 6s. per dozen.

SAVAR'S CARBOLIC ACID SOAP.

For Domestic Use. Superior quality (containing 8 per cent. of Acid). 6d. per lb.; 4s. 6d. per dozen. Toilet 4d. Tablets; 2s. 9d. per dozen.

SAVAR'S CHEST PROTECTORS.

Manufactured from best materials. 1s. to 5s. each; 7s. to 45s. per dozen.

SAVAR'S COAL TAR SOAP.

Prepared from an Original Formula; a most elegant and agreeable Toilet Disinfectant. In Tablets, 4d. and 6d. each; 2s. 9d. and 3s. 9d. per dozen.

SAVAR'S COLD CREAM.

Delicately Perfumed with Otto of Roses. Pots, 6d. and 1s. each; 3s. 9d. and 7s. per dozen.

SAVAR'S CORN AND BUNION PLASTERS.

Best White Felt. 6d. Boxes, 2s. 3d., 2s. 10d., 2s. 8d., and 3s. 6d. per dozen Boxes; and in bulk, 1s. 8d. to 5s. 6d. per gross.

SAVAR'S FEEDING BOTTLES.

These Feeding Bottles are fitted with the best quality of Materials, and are acknowledged by all to be superior to any others offered at the same prices.

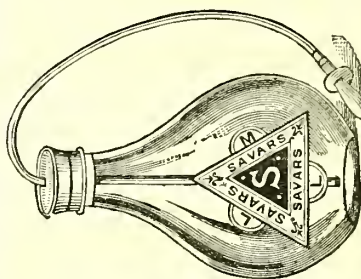


FIG. 2.

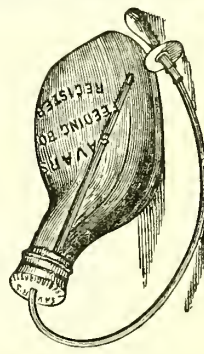


FIG. 1.

May be had either as Fig. 1 or Fig. 2, fitted with White India-rubber Tubing and Teats, or with Native Black India-rubber Tubing and Teats.

Retail, 6d., 1s., and 2s. each; 3s. 6d., 4s., 7s. 6d., 8s. 6d., and 17s. per dozen.

SAVAR'S FLORAL POMADES.

Handsomely labelled. In 1s. and 6d. Bottles; 8s. and 4s. per dozen

SAVAR'S FLY PAPERS.

For the Destruction of all kinds of Insects. The Cheapest and most Effectual made. 15s. per 1,000.

SAVAR'S FOSSILINE CORN PLASTERS.

Easily applied. Superior to any others. Boxes, 1s. each; 8s. per dozen.

SAVAR'S FOSSILINE PLASTER.

Highly recommended by the Medical Faculty as superior to other Plasters. Boxes, 9d. each; 6s. per dozen.

SAVAR'S FOSSILINE POMADE.

Prevents the Hair Falling Off. The most Economical Pomade. Bottles, 1s. and 6d. each; 8s. and 4s. per dozen.

SAVAR'S FOSSILINE TOILET SOAP.

Highly Emollient. 6d. Tablets, 1s. 6d. and 5s. Boxes; 4s., 13s., and 48s. per dozen.

SAVAR'S "GOOD SAMARITAN" PATENT POROUS PLASTERS.

Adhere readily, and are manufactured from the best materials—free from India-rubber. BELLADONNA, CAPSICUM, or STRENGTHENING, 4d. each; Belladonna and Capsicum, 27s., Strengthening, 21s. per gross.

SAVAR'S "GOOD SAMARITAN" PROTECTORS (NEW SHAPE).

Effectually Cover Chest and Back. 2s. 6d. to 7s. 6d. each; 21s. to 69s. per dozen.

SAVAR'S PERFUMERY.

The most lasting and agreeable. 6d. and 1s. Bottles; 4s., 8s., and 8s. 6d. per dozen.

SAVAR'S POROUS MARGINAL PLASTERS, ON LEATHER.

BALSAMIC, BELLADONNA, CAPSICUM, ROBORANS, &c., all shapes, far superior to any other kind of Marginal Plaster.

SAVAR'S TOILET SOAPS.

Brown Windsor, Castille, Curd, Glycerine, Honey, Oatmeal, Transparent Glycerine, &c., delicately Perfumed. In 2d., 3d., 4d., and 6d. Tablets, 1s. Bars, and 1s. Boxes.

SAVAR'S VIOLET POWDER.

Deliciously Perfumed Starch Powder only. 4-lb. and 1/2-lb. Packets, 1s. per lb.

The Trade are solicited to state distinctly when ordering that SAVAR'S Articles are required, and are cautioned that each Article is protected with the Trade Mark as above.

Less Ten per cent. Discount, Three Months' Current Accounts.

Special Discount to Large Buyers.

A COMPLETE PRICE CURRENT OF DRUGGISTS' SUNDRIES, PROPRIETARY ARTICLES, PATENT MEDICINES, &c., SUPPLIED ON APPLICATION.

SOLE PROPRIETORS:

EVANS, SONS & CO., 56 HANOVER STREET, LIVERPOOL.

H. SUGDEN EVANS & CO., Montreal, Canada, and Rouse's Point, New York.

EVANS, LESCHER & WEBB, London.

ESTABLISHED 100 YEARS.**TOILET AND FANCY SOAPS**

OF EVERY DESCRIPTION.

CHOICE PERFUMES IN BULK.

No. 1 extra 12/ per pint of 20 ozs.

No. 1 9/6 " "

No. 2 8/ " "

Put up also in great variety of size, style, and price.

SOAPS.

Zinc, Sulphur, Petroleum. } 6d. & 1/

Petroline, Juniper Tar, & 4/ & 8/

other Medicated Soaps .. } doz.

Glycerine Jelly, 6d. and 1/

stoppered bots., 4/ & 8/

per doz.

T.F. BRISTOW & CO.
TOILET SOAPS & PERFUMERY.
MANUFACTURERS.PRICE LISTS
ON APPLICATION.**BRISTOW'S SPECIALITIES.**

Carbolic Acid Soap.... } In boxes 3 tblts.

Glycerine and Carbolic Acid } 1/ & 1/5

Glycerine and Oatmeal Soap .. } 8/ & 12/ per doz.

Baby Soap for Nursery use { In boxes, 4 & 12 tblts.

(Illustrated Label) 19/ and 27/ per doz.

Family Soap, in bxs, 4 & 12 tblts (1/ & 2/9) 8/ & 24/ "

Cold Cream Soap, in bxs., 3 tbs, in bx (1/6 & 2/6) 12/ & 21/ "

Stockholm Tar Soap } in boxes, 3 tablets in box (1/6) 12/ "

Pure Coal Tar Soap } in 4d., 6d. & 8d. tblts, in 3 doz. bxs, 2 6, 3/6, 4/6 doz.

Transparent Soap, in boxes 3 tablets (1/ and 1/6) 8/ & 12/ "

Superior Lavender Soap, in boxes, 3 tablets (1/ and 1/6) 8/ & 12/ "

White Glycerine Soap, in boxes, 3 tablets (1/6) 12/ "

Dog Soap (Illust Wrapper), Carpet & Cloth Soap, Pumice Stone Soap (6d. & 1/)... 3, 6 & 7/ doz.

5 BISHOPSGATE AVENUE, LONDON.**WOODS' ARECA NUT TOOTH PASTE.**

For Removing Tartar and Whiting the Teeth, without injuring the Enamel. Sold in Pots, at 6d. and 1s. each.

WOODS'**QUININE, CANTHARIDINE, & ROSEMARY HAIR CREAM**

(WITH GREASE), Restores the Hair if weak or falling off.

Price 9d., 1s. 6d. and 3s. 6d. per bottle.

WOODS'**QUININE, CANTHARIDINE, & ROSEMARY HAIR WASH**

Similar to the above (without grease). Price 1s. 6d. and 3s. 6d. per bottle.

WOODS' DANDRUFF POMADE.

Never fails. 1s. per pot.

Proprietor: W. WOODS, M.P.S., Chemist, Plymouth.

SOLD WHOLESALE BY ALL LONDON HOUSES.

BEDDARD'S**BELGRAVIA TOOTH-PASTE**

(REGISTERED)

Is entirely different from any article of the kind, very much liked by customers, a most effectual dentifrice, and handsomely put up in large jars,

ONE SHILLING EACH.

WHOLESALE OF ALL PATENT HOUSES.

LIBERAL DISCOUNT TO LARGE BUYERS.

Prepared only by

JOHN BEDDARD,

46 CHURTON ST., BELGRAVE ROAD, LONDON, S.W.

RIMMEL'S NEW SANITARY APPLIANCES.**RIMMEL'S AROMATIC OZONIZER**, a fragrant powder which, simply spread on a plate in apartments or places of public resort, evolves the refreshing and healthy emanations of the Pine and Eucalyptus, and produces a quantity of *Ozone*, the great air purifier. It is in use in the principal Hotels, Clubs, and Theatres, and also in the Saloons and Cabins of several Lines of Steamships. In 4 oz. tins, 1s.; by post for 15 stamps; 1 lb. tins, 3s. 6d.; Spreading Plate, 6d.**RIMMEL'S OZONIZED EAU DE COLOGNE, LAVENDER WATER, or FLORIDA WATER**, sprinkled on a pad hung up in the air, destroys bad smells and noxious effluvia in sick rooms, closets, &c. It is recommended also to be used on the handkerchief when attending crowded places, visiting the sick, or travelling by land or sea. Price, 2s. 6d. and 5s. per bottle; pad, 1s. A box containing a Tin Aromatic Ozonizer, a Plate, a Bottle Ozonized Eau de Cologne, and a Pad, 5s.

N.B.—Those preparations have been submitted to the examination of eminent Chemists, who have certified their excellent effect.

SOLD BY ALL CHEMISTS AND DRUGGISTS.

WHOLESALE LIST SENT ON APPLICATION TO—

EUGENE RIMMEL, Perfumer to H.R.H. the Princess of Wales,

96 STRAND, LONDON.

ANTITARTAR

For Cleaning, Preserving, and Beautifying Artificial Teeth and Plates.

This Preparation acquires a ready sale, as Chemists are continually asked, "What shall I use for cleaning my artificial teeth." Plates that have become corroded and discoloured in the mouth are speedily restored to their former brilliancy and polish.

Sold in neat Tin Boxes, Retail 2/- each; Wholesale Price, 18/- per dozen.

SOLE PROPRIETOR AND MANUFACTURER—

J. SHIPLEY SLIPPER, Surgeon-Dentist, THE HOLBORN DENTAL SURGERY, 37 HIGH HOLBORN, LONDON, W.C.

WHOLESALE AGENTS.—Messrs. BARCLAY & SONS, Farringdon Street, London, E.C.; JAMES SLIPPER, Pharmaceutical Chemist, 87 Leather Lane, and 14 & 15 Dorrington Street, Holborn, London, E.C.

Bills, with Name and Address, may be had on application.

EAU DE COLOGNE

OF THE MOST ANCIENT DISTILLER,

JOHANN MARIA FARINA,

Opposite the Julichs Place, COLOGNE.

ESTABLISHED A.D. 1709.

PRIZE MEDALS:—LONDON, 1851 AND 1862; OPORTO, 1865; PARIS, 1867.

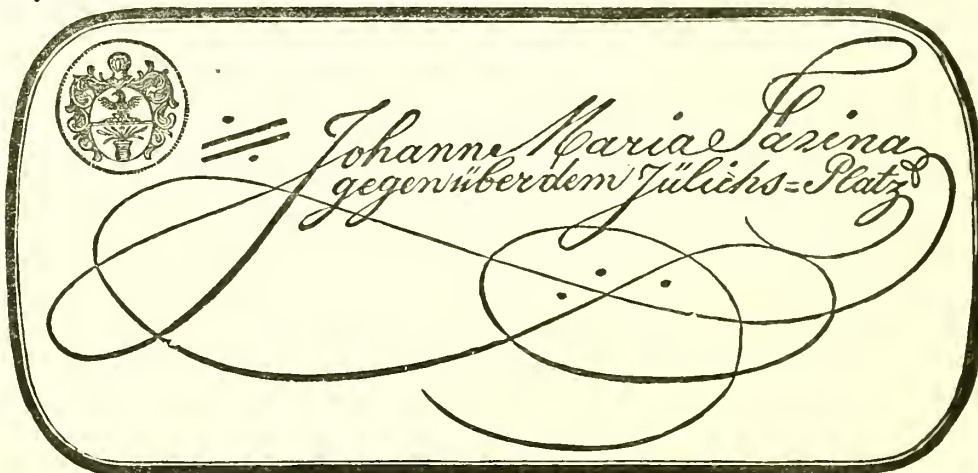
By appointment, Sole Purveyor to Her Most Gracious Majesty Victoria, Queen of Great Britain & Ireland; Their Royal Highnesses the Prince and Princess of Wales; William, King of Prussia;



Albert II., King of Saxony; Alexander II., Emperor of Russia; Francis Joseph, Emperor of Austria; Lewis, King of Portugal; H.R.H. Frederick William, Crown Prince of Prussia.

In consequence of increasing inquiries from the Colonies for my Eau de Cologne, the only genuine, I beg to submit my Price Current.

At the same time I beg to call special attention to the following facsimile of my Trade Mark, for the protection of which I have instituted thirteen suits in the High Court of Chancery, all of which have been decided in my favour.



All similar Labels being more or less imitations of the same, I shall proceed as before against all persons selling or exposing for sale any such imitations.

I only prepare one quality of Eau de Cologne. This quality never varies in the slightest degree, and there has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.

Orders equal to at least 12 dozen short bottles will be promptly executed at 12s. 6d. per dozen, against my bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam, Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra. 7½ per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.

I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some London House, or permission to draw on same at three months.

The Goods can also be shipped in transit through London at a very small additional expense, full particulars of which may be obtained of my Sole Agents for Great Britain and Ireland:—

MESSRS. J. & R. McCracken,

No. 38 Queen Street, Cannon Street, London, E.O.

The following are the sizes of my bottles:—

No. 1. Long Green Flasks	12 bottles	} to one dozen.
" 2. Short White Bottles	...	...	...	...	...	12 "
" 3. Double ditto	...	...	...	...	...	6 "
" 4. Wickered Bottles (small)	...	...	...	...	...	8 "
" 5. ditto (medium)	...	...	...	...	...	4 "
" 6. ditto (large)	2 "	

JOHANN MARIA FARINA.

COLOGNE: February, 1881.

Opposite the Jülich's Place.

SPONGES.

SEASON 1881.

IN ORIGINAL PACKAGES.

Cases Free. Quotations subject to usual Terms.

No.	Description.					Number of Pieces per Case.	Price per Case.		
							£	s.	d.
1	Honeycomb,	Selected quality	...	...	...	assorted sizes	90	14	5 0
2	"	Fine	"	...	...	"	80	10	10 0
3	"	Good	"	...	...	"	75	7	18 0
4	"	Second	"	...	...	"	70	5	10 0
5	"	Third	"	...	...	"	80	4	5 0
6	"	Rough, for Stable use	...	...	...	"	100	2	12 0
7	"	First quality	...	...	...	medium bath sizes	24	5	14 0
8	"	Choice quality	...	...	...	large	18	6	18 0
9	"	Fine	"	...	...	"	18	4	15 0
10	"	Good	"	...	...	"	18	2	14 0
11	"	First	"	...	...	small	200	3	10 0
12	"	Second	"	...	...	"	200	1	14 0
13	Turkey, Cups,	First	"	...	...	bath sizes	40	14	15 0
14	"	Second	"	...	...	"	40	11	10 0
15	"	First	"	for Toilet	...	assorted sizes	70	17	18 0
16	"	Good	"	"	...	"	70	14	15 0
17	"	Second	"	"	...	"	70	10	18 0
18	"	Useful pieces	"	"	...	"	70	7	7 0
19	"	First quality, for Nursery	...	...	...	"	190	9	18 0
20	"	Second	"	"	...	"	200	7	15 0
21	"	Solid,	First	"	for Toilet	...	150	10	10 0
22	"	"	Second	"	"	"	100	5	6 0
23	"	"	First	"	for Nursery	...	200	7	17 0
24	"	"	Second	"	"	"	170	3	18 0
25	"	Brown, Fine	"	...	...	"	175	3	17 0

SELECTED SPONGES.

Honeycomb ...	...	...	...	...	...	per lb.	6/0, 8/0, 10/0, 12/0 and 0	15	0
"	Small	...	...	...	...	...	per lb.	4/0 and 0	6 0
Turkey, Cup,	for the Bath, from 3 to 6 to the lb.	...	...	...	...	per lb.	30/0, 38/0 and 2	5	0
"	"	for the Toilet, from 8 to 18 to the lb.	...	...	...	"	30/0, 35/0 and 2	0	0
"	"	"	fine, from 8 to 18 to the lb.	...	...	"	45/0, 50/0 and 3	0	0
"	"	for the Nursery, from 25 to 40 to the lb.	...	...	...	"	20/0, 25/0 and 1	10	0
"	Eye ...	...	...	...	...	"	12/0, 16/0 and 1	0	0
"	Solid, for the Nursery, from 25 to 40 to the lb.	...	...	...	...	"	12/0, 16/0 and 1	0	0
"	"	for the Toilet, from 6 to 18 to the lb.	...	...	...	per lb.	12/0, 16/0, 20/0 and 1	5	0
"	Rough, suitable for Slates, &c.	...	...	...	...	per lb.	4/0, 6/0 and 0	8	0
"	Carriage ...	...	...	...	...	per lb.	8/0, 12/0, 16/0 and 1	0	0
"	"	brown	per lb.	4/0, 6/0 and 0	8	0

S. MAW, SON & THOMPSON,
7 to 12 ALDERSGATE STREET, LONDON.

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WHITAKER & GROSSMITH'S PURE WHITE GLYCERINE SOAP.

Richly perfumed, and guaranteed to contain the necessary quantity of GLYCERINE for effectually imparting to the SKIN the softening and healing properties for which it is so justly famed. 1s. 6d. Boxes of Three Tablets, 12s. per Dozen Boxes.

SELECT TOILET PREPARATIONS, extensively increasing in demand, which attests their excellent quality.

TOILET SOAPS. Per doz.			BOUQUETS. Per doz.			POMADES, &c. Per doz.		
Cent-Fleur (copyright)	2/6	Boxes of 3 tablets 20/	Cent-Fleur (copyright)			Cent-Fleur (copyright)	... 8/	12/ & 20/
Jockey Club	" 1/6	" 12/	Jockey Club Bouquet...	In Glass	12/	Petroleum Pomade	... 12/	& 18/
Sandringham	" 1/6	" 12/6	Ess Bouquet ...	Stoppered		Brilliantine	... 8/	12/ & 20/
Eucalyptus Oil	" 1/6	" 12/	Frangipanni ...	or	20/	Anglo Eau de Cologne	... 8/	& 12/
Wild Thyme (Thymol)	1/	" 8	Pearl of Perfumes ...	Sprinkling		Eucalyptus Vinegar	... 12/	& 20/
Semi-Cut Bars	" 1/	Bars of 6 kinds 8/6	Lime Tree Blossoms ...	cap	28/	White Cherry Tooth Paste	8/	& 12/
				Bottles.				

Trade Price Lists sent and Orders executed through Wholesale Houses, or direct from the Manufacturers,

WHITAKER & GROSSMITH, 22 SILK STREET (REMOVED FROM 120 FINE STREET), LONDON, E.C.

For Producing a Brilliant Gloss on all kinds of Starched Linen.

LINEN

Muslin Curtains, Dresses, Collars, Cuffs, and all fine linen fabrics, retain their stiffness and snowy whiteness much longer, when a little of **Harrop's Linen Glaze** is added to the Starch. It can be used with either Cold or Hot Water Starch.



REGISTERED TRADE MARK.

GLAZE.

One trial will prove its great superiority over all other preparations. It prevents the Iron sticking to the Linen, and will not injure the most delicate article.

SAVES LABOUR.

Indispensable in Every Laundry.

Sold in 1d., 3d., 6d., and 1s. Packets, and in Large Boxes for Hotels, Laundries, &c., 5/-, 10/-, and 20/- each. The penny packets are put up on neat cards, with oleograph centre, of 3 dozen each. Sample Gross 1d. packets, or 4 doz. 3d., or 2 doz. 6d., carriage paid to London or Edinburgh on receipt of Postal Order for 7s. 6d. May be had through most Wholesale Houses, or from the Manufacturer.

W. H. HARROP, CHEMIST, CREWE, CHESHIRE.

F. A. SARG'S SON & CO.'S CHEMICALLY PURE GLYCERINES AND TOILET GLYCERINE ARTICLES.

Transparent Glycerine Soap,

In registered Packets of three Tablets, and in oval Tablets in paper. Warranted to contain 33% of the purest Glycerine.

Liquid Glycerine Soap,

Best preventive against chapped hands, and unrivalled for imparting softness to them, and rendering them clean and white. See Testimonials of Professor J. von Liebig, Baron; and of Professor F. Wöhler.

Sarg's Double Distilled Glycerine, Chemically Pure,

In $\frac{1}{2}$ lb. and 1 lb. Bottles, should have a place in every nursery on account of its salutary action on the heads of children, relieving them from dandruff, and the roughness of the scalp they are so commonly subject to.

Sarg's New Carbolic Glycerine Soap,

In Boxes of three Tablets, is highly recommended as a most effective disinfection.

GLYCERINE, CHEMICALLY PURE.

SARG'S DISTILLED CHEMICALLY PURE GLYCERINE, 29° Beaumé, in Cases of Four 56-lb. Tins each.

SARG'S DOUBLE DISTILLED GLYCERINE, Chem. pure, 30° Beaumé, in Cases of Four 56-lb. Tins each; Twenty 5-lb. Bottles, Fifty 1-lb. Bottles, and 100 $\frac{1}{2}$ -lb. Bottles, with Registered Label.

SOLD BY ALL WHOLESALE CHEMISTS AND DRUGGISTS.

SOLE WHOLESALE AGENTS FOR THE UNITED KINGDOM AND THE COLONIES,

SCHMEDES, ERBSLOH & CO.,

6 Castle Street, Falcon Square, LONDON, E.C.; 14 Market Buildings, Flinders Lane, MELBOURNE;
26 O'Connell Street, SYDNEY.

SPONGES!

R. CRESSWELL & CO.,

SPONGE MERCHANTS & IMPORTERS,

32 Red Lion Square, London;

AND AT PIRÆUS AND SMYRNA.

ESTABLISHED 1850.

The Finest Qualities and Shapes obtainable are quoted below, and the Prices are, without exception, the **LOWEST IN THE MARKET.**

PRICES CURRENT OF SANDED & SANDLESS SPONGES,

IN ORIGINAL CASES AS IMPORTED.

HONEY-COMB SPONGES.

No.	Qty.		Pieces in case about	Price case. £ s. d.
1	1st	Finest selected shapes, assorted sizes	130	12 0 0
2	1st	Do. do. do.	75	7 0 0
3	1st	Do. do. do.	45	4 0 0
4	1st	Small selected shapes	275	7 0 0
5	1st	Superior do. large Bath sizes	25	7 0 0
6	2nd	Do. quality shapes, assorted sizes... ..	125	8 0 0
7	2nd	Do. do. do.	75	4 4 0
8	2nd	Good quality shapes, small ...	275	3 10 0
9	2nd	Do. do. large Bath sizes	25	5 0 0
10	3rd	Do. do. assorted sizes ...	145	5 5 0
11	3rd	Do. do. do.	90	3 10 0
12	3rd	Do. do. large Bath sizes	25	3 0 0
13	4th	For Stable use, &c.	125	1 5 0

FINE TURKEY SPONGES.

14	1st	Finest selected Cups, assorted sizes	110	18 0 0
15	1st	Do. do. do.	55	10 0 0
16	1st	Do. do. Bath sizes	35	12 0 0

Fine Turkey Sponges—continued.

No.	Qty.		Pieces in case about	Price case. £ s. d.
17	2nd	Superior Cups, assorted sizes ...	110	12 0 0
18	2nd	Do. do. do.	55	7 0 0
19	2nd	Do. Bath sizes	35	9 0 0
20	3rd	Fine Cups, assorted sizes ...	110	9 0 0
21	3rd	Do. do. do.	65	5 5 0
22	3rd	Do. Bath sizes	35	7 0 0
23	1st	Turkey Solids, assorted sizes ...	115	7 0 0
24	2nd	Do. do. do.	110	5 10 0
25	1st	Flat Saddle, assorted sizes ...	55	9 10 0
26	1st	Do. do. do.	35	6 0 0
27	2nd	Do. do. do.	55	6 5 0
28	2nd	Do. do. do.	35	4 0 0

BROWN TURKEY SPONGES.

29	1st	Finest selected, assorted sizes ...	140	4 10 0
30	1st	Do. do. do.	75	2 15 0
31	2nd	Superior quality, do.	140	3 3 0
32	2nd	Do. do. do.	75	2 0 0
33	3rd	Slate quality, do.	350	1 1 0

The above may be had Sanded or Sandless, as required.

ALL COMMUNICATIONS TO BE ADDRESSED TO LONDON OFFICES.

WHITE AND SOUND TEETH.

JEWSBURY AND BROWN'S ORIENTAL TOOTH PASTE.

This old-established and increasingly favourite Dentifrice has been Forty Years before the Public. It is warranted to retain its properties and keep in good condition in any climate.

The original and only genuine is manufactured solely by

JEWSBURY and BROWN,
CHEMISTS, MANCHESTER,

and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed. Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered.

Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d.

The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on receipt of address card, and directions for enclosure.



EVANS'S EXTRACT OF MALT.

Strongly Recommended in Asthma, Bronchitis, Consumption, Atrophy, Indigestion, and in Stomach Coughs.

(Vide Report of Professor Atfield, Ph.D., F.C.S., Professor of Chemistry to the Phar. Soc. of Great Britain.)

Nov., 1872.—"EVANS'S EXTRACT is incomparably more valuable than any preparation of Malt hitherto offered to the public."

EVANS'S STYPTIC.

The introduction of this Preparation to the notice of the Profession for every variety of bleeding arose from the desire expressed by several eminent Physicians and many patients to obtain an efficient Styptic at a moderate price—Ruspini's celebrated Styptic being so costly.

P. C. SMYLY, M.D., &c. *Surgeon to the Meath Hospital*, writes:—"I find it of the greatest use, in fact, in every instance was equal, if not superior, to Ruspini's Styptic." T. P. MASON, M.D., &c., *Physician to Mercer's Hospital*, writes:—"The styptic you had the goodness to forward to me, I found highly advantageous in the Hemorrhage of Phthisis."

Circulars of these Preparations may be had on application.

JOHN EVANS, CHEMIST TO THE QUEEN and
H.R.H. THE PRINCE OF WALES,
49 Dawson Street, Dublin, Ireland.

AGENTS, U.S.A.—WYETH & BROTHER, PHILADELPHIA.

WM. GRAHAM CARR & SON,

Pharmaceutical Chemists,

BERWICK-ON-TWEED

(ESTABLISHED 1793),

IMPORTERS AND MAKERS OF

COD LIVER OIL.

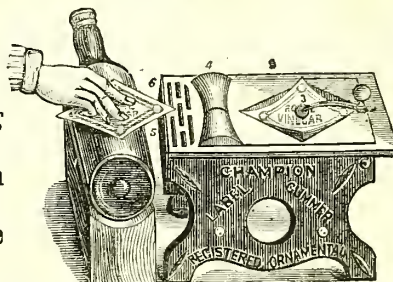
*Prize Medal, Paris, and Highest Award Silver Medal,
National Exhibition, 1881.*

We have Sold over 6,000 Winchester's of our
New Oil this year.

CHAMPION LABEL GUMMER.

REGISTERED.

Size,
9in. long
6in. high
6in. wide



Weight
about
7lbs.

DESCRIPTION.

- No. 1. The frame, made of iron.
- No. 2. The top—including label box and pressure bar (No. 3), drum (No. 4), gum trough (No. 5), and strainer (No. 6)—all made of brass to prevent rust.
- No. 3. The box containing the labels, fitted with centre-coiling brass spring, which causes each label to come to the surface, and is kept in place by pressure bar; the roller attached assists the label to the drum (No. 4).
- No. 4. The drum; of peculiar construction, and especially made to distribute the gum equally and thoroughly over the labels.
- No. 5. The trough containing the gum, paste, or starch.
- No. 6. The strainer, which dispenses with unnecessary gum that may be on the label, the same descending into the trough, causing no waste whatever.

Vide Opinions of the Press.

WINE TRADE REVIEW, April 15, 1881.

MINERAL WATER TRADE REVIEW AND GUARDIAN, April 18, 1881.

MINERAL WATER TRADE RECORDER AND ADVOCATE, June 1, 1881.

CHEMIST AND DRUGGIST, May 14, 1881.

CHEMISTS' JOURNAL, May 27, 1881.

BRITISH MERCANTILE GAZETTE, May 6, 1881.

BRITISH TRADE JOURNAL, June 1, 1881.

Price £3 10s.

**G. J. HUTCHINGS, 11 NEW CROSS ROAD,
LONDON, S.E.**

THE "DESIDERATUM" MIXING MACHINE

P. H. BRACHER & CO.,

77 HIGH STREET, WINCANTON.

THE CONDY'S FLUID CO.,

7 Falcon Street, London.

BEWARE OF MEAN AND ACTIONABLY FRAUDULENT IMITATIONS OF OUR
FIRM AND GENUINE PRIZE MEDAL LABELS, WITH
FICTITIOUS ADDRESSES.

HARVEY, SHEPHERD & CO.,

33, 34 AND 35 CHARTERHOUSE SQUARE, ALDERSGATE STREET,

LONDON, E.C.,

SUCCESSORS

TO THE LATE

WILLIAM MATHER.

WHOLESALE DRUGGISTS' SUNDRIESMEN,

MEDICAL GLASS DEALERS & SURGICAL INSTRUMENT MANUFACTURERS.



WHOLESALE DEPOT FOR THE FOLLOWING:—

CARTNER'S PATENT PILL-COATER

No. 1, 25/ No. 2, 3/3/0. No. 3, 5/5/0.

CORTIE'S HANDY PILL-COATER

5/ each

HARVEY'S PILL-COATING SOLUTION

2/ and 4/ per bottle.

HARVEY'S BLOOD PILLS

10/6, 27/, 42/, 108/ per doz.

HARVEY'S TOOTHACHE PENCILS

43/ per gross.

HARVEY'S POCKET DISINFECTANTS

4/ and 8/ per doz.

THE GALATEA SILK-FACED SPONGE BAGS

9/6, 10/6, 12/6, 15/, 17/6, 19/9 per doz.

THE IMPROVED REVOLVING LABEL DAMPER

1/3 and 1/6 each.

THE NEW ANGULAR GRAIN WEIGHTS

Stamped, 9/ per doz. sets.

THE ROYAL WINDSOR LINEN GLOSS

1d. size, 7/ per gross; 3d. size, 2/ per doz.; 6d. size, 4/ per doz.

THE ROYAL THIRST QUENCHERS

Effervescing tablets, 3d., 2/ per doz.; 6d., 4/ per doz.

RYLAND'S PATENT BOTTLE STOPPER

A great novelty, 2/ per doz.

BIRD'S CHAMPAGNE FRUIT POWDER

3/ per doz.

CARDER HONEYCOMB SPONGE

1d., 8/; 2d., 1/4; 4d., 2/8; 6d., 4/; 1s., 8/; 2s., 16/; 2s. 6d., 20/; 5s., 40/; 10s., 80/ per doz.

CARDER TURKEY SPONGE

1d., 8/; 2d., 1/4; 4d., 2/8; 6d., 4/; 1s., 8/; 2s., 16/; 2s. 6d., 20/; 5s., 40/; 10s., 80/ per doz.

IMPROVED SPRAY DIFFUSERS

Small, 9/ per doz.; large crackled glass, 45/ per doz.

HARVEY'S PRINCESS RESPIRATORS

Gilt, in leather cases, 30/ per doz.

HARVEY'S COTTON WOOL RESPIRATORS

Specially Recommended by Prof. Tyndall.
30/ per doz.

HARVEY'S GRAPE SALT OR SALINE

Handsomely wrapped, 12/ per doz.

OUR BABY'S VIOLET POWDER

Guaranteed pure, 4/ per doz.

THE COUNTY BALL BOUQUET

Relief label, every county in England, 8/ per doz.

"THE ZICKA" OR "DIPLOMACY" PERFUME

Exquisitely labelled, with sprinklers,
8/ and 12/ per doz.

THE ROYAL PERFUMES

The largest, showiest, and best in England, 4/ and 8/ per doz.

THE ROYAL POMADES

Heraldic labels, 4/ and 8/ per doz.

THE 6^D. CHERRY TOOTH PASTE

Very superior, 4/ per doz.

BIRD'S GINGER BEER POWDERS

2/3 per doz.

SUBJECT TO THE USUAL DISCOUNTS.

WILL SHORTLY BE READY FOR DISTRIBUTION,

HARVEY, SHEPHERD & CO.'S NEW PRICE LIST.

MAY BE HAD ON APPLICATION.

GENUINE EMERY, EMERY CLOTH, AND BLACK LEAD.

JOHN OAKEY & SONS,

MANUFACTURERS OF

Glass Paper, Emery and Glass Cloth; Emery, Black Lead, Pumice, Putty Powder, Crocus, Urn Powder, Tripoli, Rouge, Plate Powder, Steel Polish, Furniture Polish; Knife Boards, Brunswick and Berlin Black, &c.

OAKEY'S WELLINGTON KNIFE POLISH,

Prepared expressly for Oakey's Patent India-Rubber Knife Boards, Buff Leather Boards, and all the Patent Knife Cleaning Machines. Sold in Packets 3d. each; and Tins, with perforated Tops to prevent waste, 6d., 1s., 2s. 6d., and 4s. each.

OAKEY'S NON-MERCURIAL SILVERSMITH'S SOAP,

For Cleaning and Polishing Silver, Plate Glass, Marble, &c. Tablets, 6d. each.

OAKEY'S POLISHING PASTE,

For Cleaning Brass, Copper, Tin, Pewter, &c., &c. Boxes, 1d.; Tins, 2d.; Pots, 6d. and 1s. each.

WELLINGTON BLOCK BLACK LEAD,

In 1d., 2d., and 4d. Blocks, and 1s. Boxes.

WELLINGTON EMERY & BLACK LEAD MILLS, Westminster Bridge Road, London, S.E.

Highest Award and Prize Medal, Philadelphia Exhibition, 1876.

DIPLOMA OF MERIT, VIENNA EXHIBITION, 1873.

Joseph Pickering & Sons (J. Needham), Albion Works, Sheffield,
MANUFACTURERS OF



SOLD BY ALL CHEMISTS, GROCERS, IRONMONGERS, ETC.

Needham's

Polishing Paste,

For Cleaning Bras
Copper, and Britan
Metal Goods, &c.

Pickering's Razor

Paste,

For sharpening Razors, &c.

Waterproof

Harness Blacking,

For Black Leather
Harness.

Sheffield Knife

Powder,

For Table Knives, Fire
Irons, &c.

Plate Powder,

For Electro-plate
Articles, &c.

Furniture Polish,

For cleaning French
Polished Furniture, &c.

Brunswick

Black,

For all kinds of
Iron Work.

"LA BRILLANTINE" METALLIC POWDER

For Cleaning and Polishing Metals and
Glass (especially Brass).

PROPRIETORS—

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22 NEWMAN STREET, OXFORD STREET,

LONDON, W.,

And all Wholesale Houses. Beware of Imitation

Is used by the Life, Horse, and Dragoon Guards,
the Fire Brigades, &c.

MARBLE RENOVATOR,

For Cleansing and Polishing Marble. Retail at 8d., 1s. 2d., and 2s.
Surprising in its Effects.

"ANTI-RUST,"

For Preserving all kinds of Polished Steel, Iron, and Gun Metal from Rust.
Used with Success by some of the largest Sheffield Steel Manufacturers.
Retail at 1s. Wholesale from—

CUBLEY & PRESTON, 4 High Street, SHEFFIELD.

And all Wholesale Houses.

W. S. YATES,

Chemists' Shop Fitter, Shop Front Builder,
and Glass Show Case Maker.

PLANS AND ESTIMATES SUPPLIED FOR WORK IN ANY PART
OF THE KINGDOM.

9 CAMDEN STREET, LIVERPOOL.

INDEX TO ADVERTISEMENTS,

See Pages 25 & 26.

Goddard's Plate Powder

For nearly Half a Century this Powder has sustained an unrivalled
reputation throughout the United Kingdom and the Colonies as the BEST
and SAFEST article for Cleaning Silver and Electroplate.

Sold in Boxes, 1s., 2s. 6d., and 4s. 6d. each. Also

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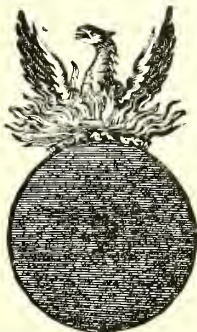
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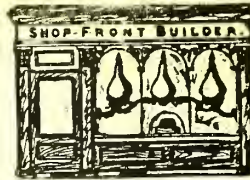
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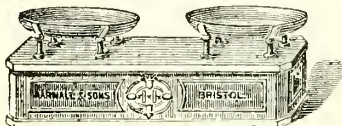
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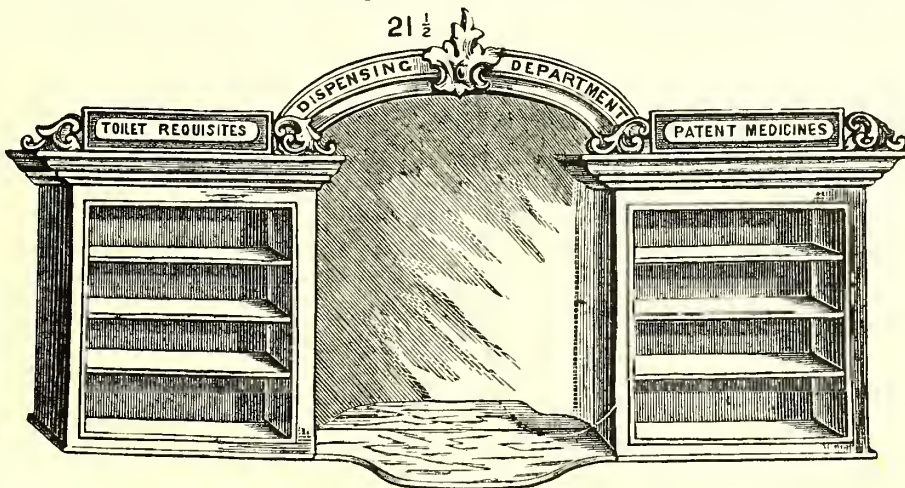
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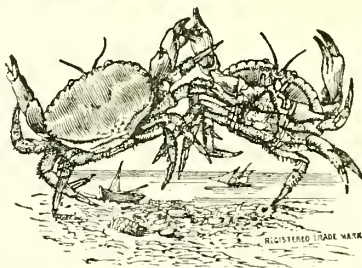
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PUBLISHER'S NOTICE.

On July 15, and not again this year, we shall be able to circulate price-lists, or prospectuses generally, with THE CHEMIST AND DRUGGIST. We can guarantee a first-class home and foreign circulation of 10,000 copies to druggists exclusively, and each copy to a separate firm.

Our circulation now regularly includes every member of the Pharmaceutical Societies of Victoria and New South Wales.



About 50 members of the Chemists' Trade Association attended the annual meeting of the society. Nothing but dissatisfaction with the proceedings of the Executive Committee was expressed, and the former officers of the Association were re-elected, while the change on the Executive Committee consisted in the election of Messrs. H. Barnaby (Dorchester), H. Davis (Leamington), R. McAdam (Glasgow), A. H. Mason (Liverpool), and G. Pasmore (Exeter).

in the stead of Messrs. T. Davison (Glasgow), G. Delves (Exeter), T. S. Johnson (Malvern), J. Owen (London), and J. Phillips (Wigan).

The Pharmaceutical Society's annual meeting was rather largely attended, and the style of criticism which has of late years become popular was freely indulged in. One gentleman wanted to ask the Government to pay for the trial in the House of Lords, in which the Society were defeated, on the ground that they had only been carrying out an Act of Parliament, and he advised a general strike of chemists until the Legislature shall submit to their terms. Another speaker wondered why refreshments should be supplied to the Council at the expense of the Society generally. It is true there were some better criticisms than these, but it will be judged from such specimens that the scale of intelligence, taste, and humour in the Society runs down to a very low point.

Messrs. M. Carteighe and Walter Hills were the new members of the Pharmaceutical Council elected in the place of Messrs. T. H. Hills and Sandford, who retired. Messrs. Spink and Wills were the unsuccessful candidates. All the former members of Council who offered themselves for re-election were accepted.

We have several times advocated the publication of some statement of their views by candidates for the Pharmaceutical Council. Only one such manifesto was published this year, but certainly in no previous year has the advantage been so apparent. Mr. Spink's circular, with its curiously-constructed paragraphs, decided many members prejudiced in favour of lucid English, at least *not* to vote for him.

The Pharmacy Exhibition held at Bloomsbury Square last month was inferior to its predecessors, both in the number, the novelty, and the interest of the objects exhibited. It was visited by a large number of chemists, who examined with great attention the goods displayed.

The new Society of Chemical Industry announces a two days' session and a dinner in London on the 28th and 29th of this month. Important papers by Dr. Siemens, Professor Graham, Mr. Mactear, and others, are announced.

On page 250 we print a practical article by Mr. Gilmour, of Edinburgh, giving formulæ for syrup and pills of protochloride of iron, and comments on the keeping properties of preparations of this chemical.

A great discovery in electrical science has been announced during the month. A "secondary battery" has been constructed by a Frenchman, and has been tested for three weeks by Sir W. Thomson, who finds that at least for that period it does not appreciably lose its power. He thinks that the problem of using electricity as a source of light, heat, and power generally is solved.

Last month Mr. Richard Ludlow Bruges, of Melksham, Wiltshire, a Justice of the Peace for the county, was charged at a London police court with having written a defamatory libel concerning the Countess of Lonsdale. The prisoner pleaded that he had written the libel while under the influence of zoedone, and evidence was given by a friend of his, a Member of Parliament, that he drank seven or eight quarts of that seductive fluid daily. If an anti-zoedonic society does not result from this revelation it will be hard on alcohol. Crime has not often been so directly brought home to a beverage. And possibly we do not know the worst. If eight quarts of zoedone will produce a libel, perhaps a few more would yield a burglary. We still want a liquor of guaranteed moral character.

The Chemists and Druggists' Trade Association of Great Britain

THE annual meetings of this Association were held on May 17 last at the Inns of Court Hotel. The first part of the business was the meeting of the General Committee. Mr. Thomas Barclay (President) occupied the chair.

The report of the Executive Committee, which had been circulated, was taken as read. It narrated that in July last the Association had defended in a test case at Stockport, in which a chemist was charged with having sold adulterated spirits of nitre. The Bench dismissed the case and allowed 10% costs. The Executive Committee regards the decision as "of great importance to the trade, the line of defence being that spirits of nitre made according to other formularies than that of the British Pharmacopoeia may legally be sold if of good quality." This was the only case under the Sale of Food and Drugs Act which the Association had been called upon to defend during the year, and the Committee congratulated the trade on the significant fact that prosecutions against chemists and druggists for the sale of adulterated drugs are becoming year by year more rare. It would be within the recollection of the members that before the Association came into existence such prosecutions were of very frequent occurrence.

In regard to the Weights and Measures Act, they had defended three cases. In the first, Mr. Wilkinson, of Lambeth, was fined 17s. for having 17 inaccurate apothecaries' weights. This case had been taken up as the first of its kind, and, in consequence of the action of the President of the Association, the President of the Board of Trade had caused a circular to be issued to inspectors, recommending them to give notice to chemists and druggists when they were prepared to test apothecaries' weights and measures. The Association had successfully defended a case under the Act at Ledbury, and also in the recent case against Mr. Whittle.

The Committee had considered the Pharmacy Bill drafted by the Pharmaceutical Council, and had agreed to its clauses, and expressed a desire to co-operate with the Council, with a view of carrying the Bill into law.

The new Medical Bill had been watched, and a memorial had been submitted to the Home Secretary on the subject of jury service.

A dispute between two members had been settled by the arbitration of the Secretary.

A grocer at Winchester had been prosecuted by the Association for infringing the Pharmacy Act, and had been fined.

The Committee sympathetically recorded the death of their esteemed colleague, Mr. John Abraham, of Liverpool.

Finally the report stated that the number of subscribers was now 4,345, and that the donations during the year had reached 71l. 16s. 6d., both figures showing a slight decrease. This might be accounted for in a measure by the continued depression in trade, and it was also stated that in February the names of all members whose subscriptions were more than two years in arrear were erased from the register.

The following was the financial statement:—

FINANCIAL STATEMENT FROM APRIL 17, 1880, TO APRIL 19, 1881.

Receipts.

	£	s.	d.	£	s.	d.
Balance brought forward from last account, viz.:—						
Balance at Lloyd's Banking Company, Limited, Current Account ..	60	7	0			
Ditto ditto Deposit Account ..	818	9	11			
Ditto in hands of Treasurer ..	25	4	0			
	904	0	11			
Deduct Law Costs, unpaid ..	73	7	3			
				830	13	8
4,345 annual subscriptions at 5s. ..	1,086	5	0			
Donations ..	71	16	6			
	1,158	1	6			
Less—Outstanding subscriptions and donations, April 19, 1881 ..	231	15	0			
				876	6	6
Interest allowed by bankers on Deposit Account, less Interest and Commission charged on Current Account ..				19	12	6
				1,726	12	8

Expenditure.

	£	s.	d.	£	s.	d.
Advertisements ..				4	10	6
Auditors' charges ..				18	18	0
Canvassing expenses ..				48	3	2
Hire of rooms for public meetings ..				5	4	6
Law costs, viz.:—						
Counsel's fees ..	12	8	6			
Solicitor's charges ..	85	14	1			
Ditto travelling expenses ..	25	15	0			
Witnesses' charges and expenses of ..	62	19	0			
Office expenses, viz.:—				186	16	7
Cleaning, &c. ..	2	4	1			
Gas ..	4	11	7			
Rates and taxes ..	8	2	11			
Rent ..	26	0	0			
				40	18	7
Postages ..				109	9	0
Reporting ..				49	6	4
Salaries, viz.:—						
Secretary ..	172	10	6			
Assistant Secretary ..	137	10	0			
Clerks ..	73	6	0			
				383	6	6
Stationery and printing ..				115	15	2
Sundries ..				11	3	10
Travelling expenses, viz.:—						
Executive Committee ..	109	12	6			
Secretary ..	26	17	6			
				136	10	0
				1,110	2	2
Balance at Lloyd's Banking Company, Limited, Deposit Account ..	838	17	2			
Ditto in hands of Treasurer ..	13	3	5			
	862	0	7			
Deduct balance due to bankers on Current Account ..	149	10	9			
Law costs unpaid ..	85	19	4			
	235	10	1			
				616	10	6
				1,726	12	8

Mr. DURRANT moved that the report be adopted.

The motion having been seconded by Mr. MASON,

The PRESIDENT said that they would be glad to hear any criticisms or suggestions upon the report while it was before them.

Mr. PATERSON (Aberdeen) observed that the Association had approved of the new Pharmacy Bill. He thought that in this they had gone rather too far. He urged that a candidate who had passed part of the examination should be allowed to pass in the subjects he had failed in at another time, and not be forced to go through the whole examination again. The Association ought to press the Pharmaceutical Council to do more for pharmaceutical education in the provinces than they had done. Their apprentices in Scotland had no means of scientific education. Some time ago, at Aberdeen, they had asked for assistance, and had been offered a loan of 10% for apparatus for three years, with the condition that they should replace all that was broken in that time. They did not think that offer very handsome, and had since set up a school for themselves, but they found a good many difficulties. The Society ought to help in education, and ought to send examiners to towns where there were laboratories in order to save young men the expense of going to London or Edinburgh. He also commented unfavourably on the clause which would prevent widows from carrying on business. He moved as an amendment that any amendment on the Pharmacy Act should contain some clause to enable apprentices to get a knowledge of their profession and pass the examinations.

Mr. R. HAMPSON (London) thought that it appeared from the remarks of the gentleman who had just spoken that the chemists of Aberdeen did not understand the position. He drew attention to the fact that although the Pharmaceutical Council, whenever practicable, responded to applications for assistance, at the same time they were obliged to be very careful to see that the money spent was used in such a manner that sound, solid education should be obtained as an equivalent, and that was why sums of 10%, 30%, and 40% were not sent broadcast over the country. He also expressed astonishment at Scotland, with its universities and admirable system of schools, requiring any help. With regard to the vexed question of widows, he thought that in the majority of cases they found it a mistake to try to carry on business through a qualified assistant, as their business generally would not pay for one.

Mr. H. H. POLLARD (Ryde) was of opinion that it should not go forth that a chemist was turned out piecemeal. He ought to be able to pass the whole of his examination whenever called upon, and not be crammed for it a little at a time.

Mr. DELVES (Exeter) said that, as the amendment had not been seconded, the discussion was out of order.

The PRESIDENT said that although the motion had not been seconded, still the report was before them, and they were entitled to speak on it.

Mr. SYMES (Liverpool) also opposed the views expressed by Mr. Paterson.

Mr. MACKENZIE (Edinburgh) had long urged that there should be some alteration in the system of examination followed by the Pharmaceutical Society. Mr. Williams had admitted, in reply to his questions a few years ago, that candidates were told sometimes wherein they had failed, but sometimes they were not told. There was the case of Sir Robert Christison, who, when he went in first for his examination in Edinburgh, failed in materia medica.

Mr. HARRISON (Sunderland) supposed that when Sir R. Christison went in again he had to go through all the examination, but Mr. Mackenzie said such would not be the case in Scotland. Mr. Harrison went on to argue that if they were going to ask Parliament for further powers, it was not the time to make the examinations more simple.

The PRESIDENT said they had discussed this Pharmacy Bill a good deal, but they could not see their way to do anything better than to adopt the proposed provisions. He had hoped to hear some discussion as to the financial position of the Association, which showed a deficit of some 200*l*.

Mr. URWICK complimented the Executive Committee on the economy with which they had done much important work.

The report was then adopted without a division, as no one seconded Mr. Paterson's amendment.

The Committee next proceeded to the selection of names of persons to be recommended to the general meeting as an Executive Committee. Thirty-five names were submitted as eligible, and from these the following 21 were selected by ballot:—

F. Andrews, London.
C. J. Arblaster, Birmingham.
T. Barclay, Birmingham.
H. Barnaby, Rochester.
C. B. Bell, Hull.
W. J. Churchill, Birmingham.
F. A. Cole, Colchester.
W. G. Cross, Shrewsbury.
H. Davis, Leamington.
R. Hampson, London.
J. Harrison, Sunderland.

T. W. Holdsworth, Birmingham.
W. Jervis, Sheffield.
J. Maltby, Lincoln.
A. H. Mason, Liverpool.
G. Pasmore, Exeter.
W. Southall, Birmingham.
T. B. Stead, Leeds.
C. Symes, Liverpool.
G. Walker, Coventry.
F. P. Williams, Manchester.

The Scottish branch had selected the following as their representatives on the Executive Committee:—

Charles Kerr, Dundee.
Robert McAdam, Glasgow.
James Mackenzie, Edinburgh.

FINANCIAL.

A lengthy conversation ensued as to the means of improving the financial position of the Association. Mr. Jervis (Sheffield) and Mr. Churchill (Birmingham) intimated a desire to see the subscription raised to 10*s*., but this did not seem to meet with the approval of those gentlemen who had had experience in canvassing for subscriptions. Mr. WILLIAMS (Manchester) suggested that the wealthier chemists might be asked to give 10*s*. a year, while the rest contributed 5*s*. Mr. ELLINOR (Sheffield), following up this idea, framed a resolution to the effect that a reserve fund should be formed to be subscribed to in addition to the regular subscription. Mr. JERVIS (Sheffield) seconded the proposal. Then the question arose as to the amount which should be fixed as the reserve fund. Mr. MALTBY (Lincoln) suggested 5,000*l*. Mr. MACKENZIE (Edinburgh) thought such a sum much too large. They would not be likely to reach it, and, if they did, subscriptions would be checked. As the time for the general meeting had arrived, it was resolved to submit the matter to the members.

GENERAL MEETING.

About 50 members were present. The President was in the chair.

The report having been taken as read,

Mr. WADE moved its adoption. This year's report, he said, was not of a very exciting character, and there was not much to be discussed in it. It appeared to be a thoroughly business-like statement of what they had succeeded in doing throughout the year, and was very satisfactory, when they considered the depressed condition of trade, the harassing, and the unjust competition that had to be contended with. He considered that the Society had worked at a very small expense, and he was not surprised at the deficit of 200*l*. They had done good service, which they might be proud of, by defending the trade from the unjust actions taken under the Sale of Food and Drugs Act, and the unjust requirements of the Weights and Measures Act. He also thought that they had acted wisely in allying themselves with the Pharmaceutical Society, and sinking any difference of opinion that might exist for the sake of avoiding antagonism. It was right to show that the Association must have a voice in any legislation affecting the trade. With regard to service on juries, he remembered the time—18 years ago—when Mr. Ward Hunt introduced the Bill then before the Legislature into Parliament, which provided that the whole of the druggists should be exempted from serving on juries; unfortunately jealousies crept in, and the exemption was to a section of the trade only. He hoped no jealousy would prevent the exemption being granted to all the trade soon. Referring to the arbitration case mentioned in the report, he would like to know if both parties were satisfied, and intimated an opinion that such action hardly came within the proper work of the Association. The report, however, was so satisfactory that he believed the meeting would heartily endorse it.

Mr. POLLARD (Ryde) seconded the adoption of the report. He said that, although they at Ryde had not put themselves greatly under obligation to the Association, still they had sufficient wit to be grateful for favours to come. The Association ought to be regarded as a mutual assurance society, and, while he did not consider that the Committee held a position 6 feet above contradiction, yet he thought what they had done might be cordially endorsed.

The SECRETARY mentioned, in reference to Mr. Pollard's remarks, that they had twice defended a neighbour of his at Romey.

Mr. E. C. WHITTLE (London) said that he was the unfortunate chemist who had been prosecuted for glass measures declared to be inaccurate. As they bore the Government stamp he thought he was safe, but the magistrates thought otherwise, and had to be taught wisdom by an appeal. He thought the wholesale houses ought to contribute more towards the funds of the Association.

The PRESIDENT said that the wholesale houses had responded liberally when asked for anything.

Mr. G. SHEPPERLY (Nottingham) noticed with pleasure at what a small cost the lawsuits had been conducted; considering how important many of them were. Other societies spent large sums in a rather fruitless way.

Mr. LONG (London) said that the action of the Association during the past year had been attended with a very pleasing success. He was of opinion that as the law said no one but a qualified chemist should act as a chemist the sale of medicines should be exclusively confined to chemists.

Mr. F. ANDREWS (London), in reply to Mr. Wade's remarks about jury service, said that when, 18 years ago, it was intended to exempt chemists and druggists from serving on juries it was found impossible to define what a chemist and druggist really was. By the register which now existed this could be exactly ascertained. He certainly thought that a pharmaceutical chemist had no more right to exemption than a chemist and druggist.

Mr. W. CHURCHILL (Birmingham) said that the Committee in their arbitration had been successful, and had given satisfaction to both parties concerned. The offending party paid, he believed, a small fine, and got off much more cheaply than if he had gone to law.

Mr. HARRISON (Sunderland) said that the Committee did not wish to obtrude themselves upon any one, but where both parties were desirous of their mediation he did not think that there could be a better way of settling disputes.

The report was then adopted unanimously.

The Executive Committee (as given) were then elected.

The PRESIDENT said that Mr. Ellinor had proposed at the

meeting of the General Committee a scheme of a reserve fund, which had been seconded by Mr. Jervis. They had not had time to discuss it thoroughly, and he hoped it would now be brought before this meeting.

Mr. ELLINOR said that what he proposed was that a reserve fund be formed in connection with the Association, and that the amount be 5,000*l.*, or such other sum as might be thought proper, to be obtained by annual subscriptions, say of 10*s.* or other smaller sums. He thought that such a fund would tend more than anything else to make their enemies fear them.

Mr. MALTRY thought it was very desirable to have a reserve fund. It would relieve the Executive from a great deal of anxiety, as to taking up cases which they were anxious to defend. No case had been yet refused, he believed, on the ground of want of money, but some had been taken up with considerable misgiving. Some thought the scheme Utopian, but he was of opinion that there should be very little difficulty about it. He thought two or three years would be sufficient to raise the fund, which would be of so much benefit and tend so much to strengthen the hands of the Association. He had great pleasure in supporting the resolution.

Mr. W. F. HAYDON (Secretary) said that on May 14, 1878 it was resolved to raise a sum of 2,000*l.* to further the interests and protect chemists and druggists.

Mr. MACKENZIE asked how much of that was invested.

Mr. W. F. HAYDON said there was only 800*l.* invested.

The PRESIDENT, in answer to a further question from Mr. Mackenzie, said that the total sum collected of the 2,000*l.* was 1,640*l.*

Mr. MACKENZIE said that he would move as an amendment that they complete their former fund of 2,000*l.* before beginning another. He thought that the necessity for money produced money; they never had been in want of money; they had always had a response equal to the demand, and they had 800*l.* at their backs. It was a very nice thing to have a reserve fund, but it had often been found that the fact of having one had taken the life out of a society, while being dependent on yearly subscriptions induced activity. He thought to attempt a thing so gigantic as a fund of 5,000*l.*, while members found a yearly subscription of 5*s.* hard, rather absurd. When he put his hand to a work he liked to carry it through.

Mr. URWICK seconded that amendment. He thought that if they did succeed in raising 5,000*l.* they would damage the Society by lessening the interest taken in it by subscribers, and it was that interest that enabled them to do work when required.

Mr. HARRISON supported the amendment of Mr. Mackenzie, and thought they should finish the project undertaken some years ago. It appeared to him that whenever an emergency arose sums were found to meet it. He also thought that by providing a reserve fund they would lose their power over their Executive.

Mr. MASON, Liverpool, said that though he supported Mr. Mackenzie he would rather that no mention was made of any particular sum. He thought they might induce members to subscribe to the reserve fund by refusing to allow them the benefits of the Association in default.

Mr. WHITTLE (London) thought it was a very wise thing to have a reserve fund. They had had only small cases up to that, but they might have heavy ones; his advice was to name no particular sum, but to get as much as they could. He did not think they would get too much.

Mr. R. HAMPSON, (London) said that by mentioning a large sum they were likely to get more than by mentioning a smaller one. Once before, in that very room, he had remarked that every trade had an association to protect its interests, and he was sure that even the humblest of them had a larger sum at their bankers than they had. He thought with a fair amount of energy they ought to raise a sum sufficient to establish the Association on a satisfactory basis.

After some further discussion the PRESIDENT suggested that the amendment might request the Executive to take steps towards raising and maintaining a reserve fund of 2,000*l.* The balance-sheet showed that they were not living within their income, but continually had to encroach upon their capital. If they could raise 2,000*l.* and keep that sum intact they would have all they needed.

This suggestion was ultimately acceded to.

THE ELECTION OF OFFICERS

was then taken, and resulted as follows:—

Mr. THOMAS BARCLAY, President.

Mr. ROBERT HAMPSON, Vice-President.

Mr. WILLIAM SOUTHALL, Treasurer.

Mr. T. W. HOLDSWORTH, Honorary Secretary.

The President, Vice-President, and Honorary Secretary having acknowledged the election, a resolution was passed, on the motion of Mr. KERR, Dundee, seconded by Mr. WADE, authorising the Executive Committee to take steps to place the claims of chemists and druggists before the Royal Commission on Medical Legislation.

The meeting concluded with a vote of thanks to the Executive Committee and officers for the work they had done during the past year, moved by Mr. HARRISON and carried unanimously.

The Pharmaceutical Society.

THE ANNUAL MEETING.

ON May 18 the Pharmaceutical Society celebrated its fortieth anniversary. There were about 150 members present.

The PRESIDENT (Mr. T. Greenish) briefly commented on the subjects touched upon in the report. The report was taken as read.

It commented on the funds, showing the exceptional expenses (legal, "Progress of Pharmacy," index to journal, &c.) referred to the library, the museum, papers for the evening meetings, the House of Lords' decision and the new Pharmacy Bill, the forthcoming International Pharmaceutical Congress, the "Hanbury" gold medal, which has been awarded to Professor Flückiger, the Benevolent Fund, for which subscriptions and donations show a falling-off, and the deaths of Messrs. Bailldon and Mackay, of Edinburgh, and Mr. Abraham, of Liverpool. The financial statement was as follows:—

FINANCIAL STATEMENT FROM JAN. 1 TO DEC. 31, 1880.

<i>Receipts.</i>		£	s.	d.	£	s.	d.
Balance in Treasurer's hands, January 1, 1880					1,390	4	5
Balance in Hon. Secretary's hands, N.B. Branch, January 1, 1880	.. .. .				43	0	4
London and Westminster Bank—On deposit..					500	0	0
Life Members' Fund—Interest					87	18	9
Interest on Investments.. .. .					615	6	9
<i>Subscriptions:—</i>							
1,729 Members, Pharmaceutical Chemists..	1,815	9	0				
803 " Chemists and Druggists ..	843	3	0				
1,025 Associates in business	1,076	5	0				
840 Associates not in business	441	0	0				
1,074 Apprentices or Students	563	17	0				
24 Entrance Fees	50	8	0				
	4,790	2	0				
Fines upon restoration to the Society..	42	5	3				
					4,832	7	3
<i>Examination Fees:—</i>							
1,276 Preliminary Examination Fees ..	2,292	12	0				
13 Modified " "	13	13	0				
679 Minor " "	1,875	14	0				
128 Major " "	505	2	0				
					4,687	1	0
<i>Registration Fees:—</i>							
16 Registration Fees as Chemists and Druggists	84	0	0				
15 Fees for restoration to the Register ..	15	15	0				
					99	15	0
Balance due to Hon. Secretary, N.B. Branch, December 31, 1880					19	6	5
					12,274	19	11

Expenditure.

	£	s.	d.	£	s.	d.
Balance due to Secretary, January 1, 1880				22	10	7
Annuity Dr. Redwood				100	0	0
Carriage of books to or from the Library, and other parcels				27	7	11
Certificates of death				17	7	7
Conversazione	200	14	0			
Exhibition of Apparatus, &c.				26	17	3
Pharmaceutical meetings	39	4	1			
				266	15	4
Examiners, Boards of—						
<i>England and Wales</i>						
<i>Scotland</i>						
Fees to examiners	1,275	15	0	248	17	0
Fees to superintendents — Prelim. examination ..	145	19	0	21	0	0
Hire of rooms for conducting prelim. examination ..	44	10	0	3	16	6
Travelling expenses ..	177	11	3	9	5	10
Refreshments for examiners ..	100	7	1	10	16	0
Apparatus, drugs, chemicals, for examinations and sundry charges in connection therewith ..	57	1	2	23	13	7
				317	8	11
				1,801	3	6
				2,118	12	5
Fees to the College of Preceptors				128	12	6
Deputation to Scotland				36	8	4
				2,283	13	3
Fixtures and fittings				64	19	1
Furniture				17	0	0
House expenses—Gas, Water, Coal, &c. ..				233	2	11
Journal—Account (which includes 690 <i>l.</i> 4 <i>s.</i> 3 <i>d.</i> cost of Postage to Members and others)—						
Balance				680	19	7
Laboratory:—						
Professor of Practical Chemistry—Endowment of chair ..				100	0	0
Prize medals, &c.				5	8	9
				105	8	9
Law Costs:—						
General Charges	350	4	3			
The Society v. The London and Provincial Supply Association	819	9	2			
				1,169	13	5
Lectures:—						
Professor of Chemistry and Pharmacy—						
Endowment of chair	100	0	0			
Professor of Botany and Materia Medica—						
Endowment of chair	100	0	0			
Subscription to Royal Botanic Gardens ..	21	0	0			
Prize medals, &c.	18	10	4			
				239	10	4
Library:—						
Librarian's salary	200	0	0			
Catalogue, new edition, 5,000 copies ..	362	3	9			
Purchase of books, &c.	97	13	6			
				659	17	3
Museum:—						
Curator's salary	200	0	0			
Assistant's salary	60	10	0			
Specimens, bottles, and sundries	108	0	4			
				368	10	4
Branch of the Society in Scotland:—						
Assistant-secretary in Scotland—Salary ..	150	0	0			
Current expenses	149	12	4			
				299	12	4
Postage				375	13	7
Register				40	18	2
Repairs and alterations				275	14	9
Rent, taxes, and insurance of plate glass ..				398	10	2
Returned subscriptions to Associates ..				15	15	0
Stationery, engraving, printing, and office expenses				308	3	7
Cost of publication, "Progress of Pharmacy" ..				481	6	4
Salaries:—						
Secretary and Registrar:—						
Salary	450	0	0			
Rent	100	0	0			
				550	0	0
Assistant-secretary	300	0	0			
Clerks and servants	874	18	6			
				1,724	18	6
Cost of materials supplied to the Bell Scholars				10	0	0
Council prizes and herbaria medals				8	12	6
Sundries (including 15 <i>l.</i> 19 <i>s.</i> 3 <i>d.</i> for Diploma cases)				21	18	1
Travelling expenses—country members of Council				421	17	0
Refreshments for Council				47	18	4
Balance, December 31, 1880:—						
In Treasurer's hands	1,519	2	7			
In Secretary's hands	68	2	8			
				1,587	5	3
				£12,274	19	11

The Benevolent Fund account showed an income of 551*l.* 5*s.* from dividends, 41*l.* 7*s.* from donations, and 1,184*l.* 14*s.* 10*d.* from subscriptions. The sum of 980*l.* had been paid to 31 annuitants, including two now deceased. Fifty-seven casual grants, amounting in all to 637*l.* 14*s.*, had been made.

The amounts invested are 23,500*l.* to the credit of the Society, and 21,050*l.* to the credit of the Benevolent Fund.

Mr. MEE moved, and Mr. J. B. MACKAY seconded, the adoption of the report. Mr. SMITH (Torquay) opened the criticism on it, though he stated that he did not regard the Council as responsible for its disappointing character. He first attacked the Journal postage item, and asked if they could not have a supplementary journal account. They were told, as an inducement to advertise, that 7,000 copies were circulated weekly, but less than 6,000 persons were entitled to receive it. Was there no asset for the balance? He thought some of the postage of these journals might be saved. For instance, three copies came to his establishment, and only one of the three was read. Then he came to the School of Pharmacy, which they endowed with some 350*l.* a year, charged no rent, and, he supposed, provided gas and water free. Ought they not to be told how many students had been educated there during the past year, and how many had passed into the profession through the Minor and Major examinations? It was hardly pleasant to think they were subsidising an institution for training analytical chemists, medical men, and so forth. Then he thought the Council ought to do something for provincial education, whether provincial associations made application or not. Lastly, he was glad to see a movement towards an improvement in the education system. The Minor examination, he considered, ought to qualify a man for assistantship only, and the Major be the test applied to men before they went into business.

Mr. URWICK appeared this year as the apologist of the Council. The Journal account had often been explained, and ought to be understood by this time. The expenses had been heavy, but the Council had been bound to fight the store question, and having eaten their loaf they could not expect still to have it. He had found the Council very attentive to cases of infringing the Pharmacy Act that had been brought before them, and he believed grocers were now more careful how they went into the dispensing business. Mr. Urwick concluded by expressing his regret at the loss to the Council of Messrs. Sandford and Hills by resignation and of Mr. Mackay by death.

Mr. BROWN, of Greenwich, expressed a desire to have more details about the Journal, and then Mr. MACKENZIE, of Edinburgh, repeated the criticisms which he has frequently made as to the alleged neglect of provincial pharmaceutical education. From that he went on to discuss the Pharmacy Bill, which he thought was almost too direct shooting against the enemies of the trade. He thought that no one should be a manager of a business unless properly qualified, and that the Bill should expressly prohibit unqualified persons being partners in chemists' businesses. Doctors, too, he urged, ought to elect whether they would be doctors or druggists, and they, as well as pharmacists, should be compelled to leave their establishments in charge of qualified men. The Society, he thought, paid too dearly for their general law work, and he also remarked on the rising nature of the item for salaries, which amounted to 703*l.* in 1879, 770*l.* in 1880, and now had reached 874*l.*

Mr. FITCH advocated a clause in the new Pharmacy Bill to compel the appointment of a qualified assistant to manage branch businesses. They would never get Parliament to allow them to have as many branch businesses as they pleased managed by unqualified assistants, and stop stores from carrying on the business with qualified assistants. There ought to be, he thought, an inspector engaged by the Council to look after breaches of the Pharmacy Act. Then he alluded to a certain store in which he was sorry to say a member of the Peerage was interested, and which he afterwards explained was the Columbia Market Store, which published a price-list containing remarks as to druggists' profits, and offering, among other things, Battle's vermin-killer 3*d.* packets for 2½*d.* He claimed that druggists should have the exclusive right to deal in drugs and physic, and he moved a resolution to the effect that an organised effort to press

this view upon Parliament should be made by the Society.

Mr. LONG seconded the motion, but Mr. HAMPSON having pointed out that it was not in order while another motion was before the meeting, Mr. FITCH withdrew it. Mr. LONG had his say, however, which was to the effect that the Government ought to pay for the House of Lords trial, as the Society, in prosecuting, was only carrying out an Act of Parliament. He was still of opinion that the law had been interpreted inaccurately, and he suggested holding mass meetings, and shutting up their shops until they could get such an Act passed as was required.

Mr. HOWARD HALL criticised the expenses of examination, and Mr. WHITTLE narrated his experience under the Weights and Measures Act.

Mr. WELLS followed with a varied and lengthy indictment. The one gleam of satisfaction which he seemed to have gathered from the report consisted in the fact that fewer candidates for the Preliminary examination were coming forward. That, he thought, was a subject for congratulation. Then he urged that the meetings of the Society ought to be held half-yearly, so as not to leave the Council irresponsible for 12 months, as at present. Next, he objected to the charges for refreshments to the Council and examiners, but his observations on this head did not coincide with the taste of the meeting. After supporting Mr. Smith's request for supplementary statements regarding the Journal and the school, he went on to object to the insertion of advertisements in the former for assistants for stores. He next wanted to know whether it was legal for firms to trade as chemists under names which did not represent the actual owners of the business, instancing especially Godfrey & Cooke. If that was an invasion of the Act why did not the Council fulfil their duty in respect to it? Homœopathic chemists, too, he said, though not registered, sold many scheduled poisons, and he thought the Council had been remiss in regard to them. Then he remarked on the "slap in the face" which the Council had administered to the trade by electing to their body as a representative a gentleman not a candidate at the last election (Mr. Butt), and setting aside another (Mr. Spink), who had received the highest number of votes among the unsuccessful candidates. Lastly, he animadverted, amid rather warm cheers, to the use made by certain professors of the School of Pharmacy of their title as such in connection with puffs of proprietary preparations. A certain Royal Universal Cooked Food—which was evidently lentils—was now being advertised with the recommendation of Professor Attfield, and another learned professor's name was connected with a certain wine.

Mr. SCHACHT wished to reply to some of the comments made about grants to provincial associations. The absence of such items from the balance-sheet was due rather to the apathy of the provinces than of the Council. He might say, however, on behalf of the Association with which he was connected, that the Council had given valuable aid which was not mentioned to that and other associations, in the form of museum specimens, which had a guarantee of value as specimens which money could not buy.

The PRESIDENT also briefly replied to a few of the points raised. He mentioned the special expenses which had been incurred, and, in regard to the cost of the appeal case, he said they had been urged to try the case and they had done so. They had bought a legal decision at its usual price. He could not say, however, that the law which they had got for their money was of the nature and quality demanded by the purchaser. If the members and associates would fetch their Journals from the office they would save the cost of postage.

The report was then adopted.

The Council were beginning to flatter themselves that their troubles were over, when Mr. CARTEIGHE rose to ask for some explanation about the memorial tablets, which, it appeared, were about to be erected in the Society's house. Was it too late to ask the Council to reconsider the matter? Mr. EKIN and Mr. URWICK also expressed objection to the tablets.

Then a member commenced a criticism on the dinner tickets from a temperance point of view, objecting to the charge being inclusive of wine. The PRESIDENT, however, ruled that that subject did not come within the business of the meeting. As to the tablets, he said, they had been

ordered, and would be put up; and, for his part, he could see no objection to them.

Mr. CARTEIGHE, however, let it appear that his objection was too solemn to be thus whiffed away, and he, therefore, moved a resolution instructing the incoming Council to rescind the previous resolution to erect them.

Mr. FRAZER, who had protested against tablets in the Council, seconded the motion.

After some discussion, Mr. CARTEIGHE agreed to limit his objection to the tablet recording gifts to the Benevolent Fund.

The PRESIDENT said the matter had been before the trade for months, and it was strange that no word of objection had been uttered. There ought to have been a notice of such a discussion.

Mr. WELLS objected to the assumption that they were not competent to discuss questions concerning the Society at the annual meeting. That was their purpose in coming together.

The SOLICITOR intervened, calling attention to a bye-law, according to which, he said, it was not competent for the meeting to discuss other subjects than those which—he begged pardon, the bye-law he was reading referred to special meetings only. Several members of the Council defended the tablet in a rather half-hearted manner, each disclaiming any special interest in it. Mr. BOTTLE moved an amendment to Mr. Carteighe's motion, the object of which was to retain the tablet, but to place it in a less prominent position than in the hall; but this suggestion of a compromise was not persevered in. Ultimately a show of hands was taken, when the majority voted for the resolution.

A vote of thanks to the President was moved by Mr. STACEY, seconded by Mr. URWICK, and carried.

An adjourned meeting was held on May 20, to receive the report of the scrutineers and declare the result of the election of Council. Mr. Hopkin, chairman of the scrutineers, handed in the following report:—

We, the undersigned scrutineers appointed at the Fortieth Annual General Meeting of the Pharmaceutical Society of Great Britain, do hereby certify that we have examined the voting-papers committed to us, and report the following:—

Voting-papers reported by the Secretary to have been					
Issued .. .. .	..	..	..	..	3,627
Voting-papers received .. .. .	..	..	..	..	1,635
Voting-papers issued but not returned					1,992
Voting-papers received					1,635
Voting-papers disallowed:—					
Informal .. .. .	..	..	..	..	8
Received by post too late .. .. .	..	..	..	..	87
					95
Voting-papers registered					1,540

Result of the Poll.

Greenish	1,448	Richardson	1,339
Symes	1,436	Radley	1,323
Churchill	1,428	Carteighe	1,287
Bottle	1,423	Hills	1,273
Hampson	1,426	Butt	1,212
Williams	1,398		
Gostling	1,394	Spink	774
Woolley	1,380	Wills	282
Robbins	1,354		

W. K. HOPKIN, Chairman.

The CHAIRMAN said it was a fact to be regretted that at a time when subjects of great interest to pharmacists were under discussion less than one-half of the voting-papers issued had been returned. He thought it showed great apathy on the part of many persons entitled to vote.

AUDITORS.

There being only the requisite number of candidates (five) for the office of auditors, the Chairman declared the following duly elected for the ensuing 12 months:—

Hodgkinson, William, 74 Golden Lane, E.C.
 Lescher, Frank Harwood, 60 Bartholomew Close, E.C.
 Stacey, Samuel Lloyd, 300 High Holborn, W.C.
 Thompson, Henry Ayscough, 22 Worship Street, E.C.
 Watts, William Manning, 32 Lower Whitecross Street, E.C.

THE ANNUAL DINNER OF THE PHARMACEUTICAL SOCIETY.

THE tenth annual dinner of the Pharmaceutical Society was held on the evening of May 17 at Willis's rooms. The company present numbered but little more than 100, and presented the thinnest attendance since the dinner has been instituted. It is to be noted, too, that only a small proportion of those present were chemists and druggists actually in business as such. The staff at Bloomsbury Square, scientific and medical guests, representatives of the wholesale houses, and some half-dozen newspaper reporters made up fully two-thirds of the company. A good many members of the Society, visiting London during the week, commented on the costliness of the entertainment which, as they understood, was at first designed to give an opportunity of social union for the scattered members of the trade.

The chair was occupied by the President of the Society, Mr. T. Greenish, and the more distinguished guests were Professor Abel, C.B., F.R.S., President of the Institute of Chemistry; Dr. Broadbent, President of the Medical Society of London; the Master of the Society of Apothecaries; Mr. Chaney, of the Board of Trade; Mr. Wyndham Cottle, Mr. Anderson Critchett, Mr. Dowse, Mr. Thirlston Dyer, F.R.S., Dr. Bedford Fenwick, Professor Frankland, D.C.L., F.R.S., Dr. Douglass Powell, Dr. Richardson, F.R.S., Dr. Gilbert Smith, and Mr. Sowerby.

The toasts given during the evening were the following:—"Her Majesty the Queen," and "His Royal Highness the Prince of Wales, the Princess of Wales, and the rest of the Royal Family," both proposed by the President; "Science," proposed by the Vice-President (Mr. G. F. Schacht), and responded to by Dr. Richardson, F.R.S. According to the programme, this toast was to have been acknowledged by Messrs. William Spottiswoode, LL.D. (President of the Royal Society), and James Abernethy, F.R.S.E. (President of the Institution of Civil Engineers), but neither of those gentlemen appeared at the dinner-table. Dr. Richardson filled the vacancy with an eloquent speech, prepared at about five minutes' notice. "The Medical Profession" was proposed by the President, and replied to by Dr. Broadbent (President of the Medical Society). Professor Abel next proposed "The Prosperity of the Pharmaceutical Society." Speaking on behalf of the Institute of Chemistry, he acknowledged the cordial manner in which the Society had met them in regard to the title of "chemist," and he complimented the Society on the thoroughness with which they had always striven to counteract by practical examinations the assumption of sound acquirements which men of brains could so rapidly pick up. The other scientific societies which he, with diffidence, represented, and which numbered so many members of the Pharmaceutical Society among them, desired on all occasions to honour and respect the work of the Pharmaceutical Society.

The President, in replying, said that 40 years ago pharmacy could hardly be said to exist in this country at all. Now it would compare favourably with that of other countries, where it had been cultivated as an art for centuries. The International Pharmaceutical Congress, to be held in London this year, would afford an opportunity of comparing English and foreign pharmacy. He also expressed gratification at the honourable position which pharmacy held in the esteem of the medical profession.

Lastly, Mr. Sandford proposed "Our Guests," to which Mr. Thirlston Dyer, of Kew Gardens, responded, in the course of his remarks paying high compliments to the work of the Society, and especially to its Journal.

Some singing by professional artistes was interjected among the speeches, which came to an end about 10.30 P.M.

THE CONVERSAZIONE

At the South Kensington Museum on May 18 was attended by 2,456 ladies and gentlemen, and was generally reported as successful and enjoyable. The range of entertainment provided was exactly similar to that which has invariably been offered.

The Pharmaceutical Exhibition.

THE collection of pharmaceutical apparatus, drugs, chemicals, and accessories of the trade, which was open for inspection during the three days of the pharmaceutical meetings, attracted a considerable crowd of chemists, who seemed generally interested. The exhibitors were fewer than last year, and many of those who were prominent last time were absent on this occasion. This fact does not seem to indicate that the first exhibition produced any very brilliant commercial results. Probably, however, a truer reason for the want of interest manifested by the wholesale houses was the committeeism and officialism which clogged the arrangements. Manufacturers were carefully made to understand that their products would have to be approved by the Pharmaceutical Council, or at least by a committee thereof, and the impression was fostered if not absolutely inculcated, that nothing except scientific novelties of the utterly too-too class would be welcome. So it came to pass that by the date when it had been decreed that applications for space were to end the committee found themselves with scarcely a dozen exhibits promised. No one will suppose that the wholesale trade of this country are so torpid as that fact would suggest. Had the exhibition been got up in the usual way, space being offered at a price to whomsoever would buy it, to exhibit what he might think would pay him to show, the rooms would have been filled half-a-dozen times over. We do not think that such a course ought to have been adopted. The Pharmaceutical Society is losing money, it is true, but it has not yet reached the poverty line which would justify such a use of its premises. We merely state the fact to show that exhibitions of high moral purpose, such as this one was intended to be, are somewhat above the heads of the average pharmacist of this generation. They do not want to "live up to" the standard which the Council would fain raise, and if they did wholesale houses have other objects than the cultivation of the æsthetic tastes of the extreme minority.

The production of an absolutely uninteresting collection such as the President would not have been ashamed to show to one of his German friends having been found impracticable, "the conditions were somewhat relaxed," and the necessary complement of exhibitors was brought in.

AERATED DRINKS

Were at first to be refused with something approaching scorn, but when the ban was removed they rushed in with their own impetuosity, and it is a melancholy fact that the room to which they were limited was the most popular of all. Each exhibitor was well provided with stock and with champagne glasses, and the patient visitor had the opportunity of so soaking himself with phosphorus that if the "London Physician" who groans in the *Standard* every few weeks about the consumption of such beverages had been on hand he would have assuredly predicted a general conflagration from spontaneous combustion. Zoedone, in the majesty of its unquestioned monarchy among the beverages, was the least demonstrative of any of them, but its troublesome rival, Hedozone, was pushed energetically by Mr. Packham and his friends. A representative of Messrs. Evans, Lescher & Webb was particularly eloquent on the charms of Vin Santé. He had a peculiar advantage in being able to minister to any taste by combining with Vin Santé one or other of the delicious fruit flavourings and cordials made with the Montserrat lime-juice. Next to these Messrs. Idris & Co.'s products were extensively represented. Their sparkling Phosphate was the most prominent of their liquors, but the sparkling Apple Wine, which they offered on draught, also attracted a host of admirers. This firm is particularly ingenious in the invention of new beverages, as instances of which, shown at this exhibition, may be named "Sikkan," a beverage containing all the nutritive constituents of oatmeal, sparkling orange and orange quinine wine, sparkling peptade, sparkling lupulade, aerated citrate of caffeine, aerated salicylate of lithia, aerated fluid magnesia, and aerated lime-water in syphons, and many other drinks. The Chemists' Aerated Water Company (Limited), which is gradually growing in strength, also made a good impression with sparkling "Rubine"

and sparkling "Limine." The visitors, generally, were content to take on trust the statements as to the medicinal virtues of the Harrogate, Kissingen, and sulphur waters which the company also exploit. Mr. Swenden, of Darlington, sent samples of his "Neurotone," and the Quinada Company sent their specialty, which is recommended for its freedom from iron and phosphorus, as well as from alcohol.

APPARATUS AND SUNDRIES.

The Weights and Measures Act is responsible for the chief feature of the exhibition of apparatus. Scales, balances, weighing machines, weights and measures were very conspicuous, and Messrs. De Grave, Short & Co. showed a very extensive series. Gorham's patent tubular balance exhibited by Mr. Gorham, M.R.C.S., of Tunbridge, was described and figured in our April issue. The principle is the same as that of the steelyard, but the lever is lengthened, not by moving a weight further from the fulcrum, but by drawing out the telescopic centre of the lever-arm. The instrument shown was neatly made, with brass pan and vulcanite beam, and was of course accurately adjusted.

Messrs. Harvey, Shepherd & Co. showed angular brass weights—that is, weights made of bits of wire bent to indicate the number of grains they represent—a triangle for three, a square for four grains, and so on. This plan had long been adopted for platinum weights used by analytical chemists. The weights are easier to handle than the ordinary pieces of sheet metal. Mr. W. Stone showed balances and weights, and a neat circular spirit-level for adjusting the scales.

The revolving-fronted shop-counter, exhibited by Messrs. S. Maw, Son & Thompson, and which had caused the Committee so much anxiety on account of its size, was a fine piece of workmanship. The bent-glass fronts can be raised by means of a handle by the seller at the back of the counter, an arrangement which adds both to their safety and convenience.

Mr. W. H. Symons showed a new case for dispensing scales, intended, like the cases of chemical balances, to protect the scales from dust and vapours. Besides the movable glass front, the right-hand side of the case was hinged, and opened laterally to allow easier access to the scale-pan. Both pans of the scales are supported on metal claws instead of the silk cords generally used for the left pan, which collect dust and attract moisture; the pans were solid silver, and the scales and weights were silver plated.

Microscopes, and optical appliances microscopical and otherwise, were exhibited by Messrs. C. Baker & Co., Lajeune & Perken, and Edmund Wheeler. The Ionic, Gothic, Mediaeval, and Irish black oak frames of the barometers exhibited by Messrs. Joseph Davis & Co. are doubtless intended to remind observers that the pressure of the atmosphere varied long before any attempt was made to measure it. As modern fashions go, our eyes will doubtless soon be delighted with Mediaeval locomotives and Gothic railway carriages. But these vagaries are certainly popular at present, and may help to make these barometers what the maker intends, "a permanent attraction in pharmacies."

Thermometers for all purposes—clinical, bath, registering, and so forth—were exhibited by J. Davis & Co., L. P. Casella, Arnold & Sons, Bourne & Taylor, and Harvey, Shepherd & Co. Messrs. Arnold's clinical thermometers have the scale coloured red instead of black, which makes the reading easier. Messrs. Harvey, Shepherd & Co. showed a card of half-a-dozen 18. 67. thermometers, which agreed in their indications most remarkably. If thermometers had been in common use, that Royal Stuart who spent much of his life in the vain attempt to get two watches to go alike, might have found quite as much excitement in endeavouring to get two common thermometers to agree with one another.

Gimingham's patent blow-pipe, exhibited by L. P. Casella, is an ingenious tool for amateur or professional glass-blowers. It is used with gas; the jet can be rapidly changed from a large roaring Bunsen flame to a small finely-pointed cone. Gimingham's Sprengel air-pump, with five fall tubes, fearfully and wonderfully made, is exhibited as one of the products of this blow-pipe, and inspired us with profound faith in its capabilities.

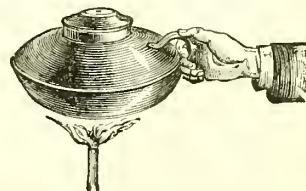
Messrs. J. Davis & Co. exhibited "the A B C water-testing apparatus, containing sufficient solution for a thousand

separate and distinct tests, with instructions." If well pushed, this is sure to sell among the better educated classes, especially when sanitary questions agitate the municipal breast, but we are doubtful if it can be regarded as much better than a scientific toy.

Sifting and mixing machines were shown by Messrs. P. H. Braeher & Co., of Wincanton, and Joseph Baker & Son, of Finsbury. In both some improvements were noticeable. Mr. Braeher's larger machines are now worked by a fly-wheel, and to the smaller ones a side outlet for the powders has been arranged. Messrs. Baker's new hopper-machinette enables the mixing to be effected in a hopper, and then by an adjustment transferred to the sifting apparatus.

American drug mills were exhibited by J. Baker & Son, Geo. Burton, and Burroughs, Wellcome & Co. The last-named firm exhibited the "Enterprise" tincture press, operating on the marc of tincture of arnica flowers. The flowers after the process were only slightly damp. They also showed an ingenious little apparatus, called the "Burrough's Inhaler," by which ammonium chloride gas may be inspired from a double bottle containing ammonia and hydrochloric acid respectively in its parts. The purpose of the apparatus is to apply the gas to the throat and post-nasal cavity, which is accomplished by expelling it through the nostrils.

A simple pill-coater, exhibited by Messrs. Bourne & Taylor



as the "Rotary," much resembled another shown by Messrs. Harvey, Shepherd & Co. as Corties'. Cartner's pill-coater was also exhibited by both of these firms, and it was claimed to have become the property of the latter firm. Mr. Cartner seems to have sold his rights in the property several times over, though, we believe, he never completed the patent. The apparatus was in use among American confectioners for comfit-making some time before it made its appearance in England. A fine pill-coating machine exhibited by Messrs. Maw, Son & Thompson was a rather more complicated development of the rotary principle, on which, perhaps, all coaters are made. A double motion, like that of the earth round the sun and its own axis, overcomes the tendency of the centrifugal force to fix the pills in one position when the cup rotates rapidly, and ensures a uniform coating.

Cocking's pill machine, piper, and burnisher were again to the front. The machine was the only one exhibited for cutting and rounding pills in large quantities. Messrs. Maw showed some handsome counter machines, one of them with nickel-plated cutters. Proctor's pill-scoop, shown by Bourne & Taylor, is a simple and ingenious little help for counting and boxing pills.

Digne & Co., of Marseilles, showed an apparatus for enclosing powders in wafer envelopes.

Moulds for pessaries and suppositories were shown by Messrs. Maw & Co.

Messrs. Bourne & Taylor showed a stopper-loosener—a little block of boxwood pierced with oblong holes of sizes to fit various stoppers. They also exhibited a measuring-funnel, which should be popular with chemists who deal in turpentine, oils, or naphtha. The measure is suspended on an axle in the funnel; when filled it is turned round on this axle, still within the funnel, and pours out its contents without a chance of spilling. It is made in various sizes.

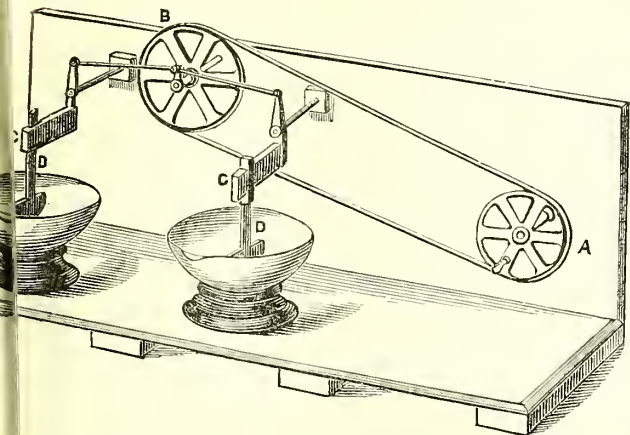
Mr. Hutchings' "Champion" label-gummer, which we noticed last month, was worked by himself, and attracted much attention.

The Silicated Carbon Filter Company showed the "Ascension" filter we described and figured last month. The Sanitary Appliance Company's "Indispensable" filter is attached to the water-tap, and delivers the water as fast as the tap alone.

Bronchitis or croup kettles, food-warmers, and the like were exhibited by Messrs. Maw & Co., Young & Postans (who showed Allen's), and Arnold & Sons. Messrs. Maw

had a beef-tea apparatus on the principle of Papin's digester. Messrs. Young & Postans showed a 2s. "complete kitchener" for tourists and travellers, which called up memories of *alfresco* feasts in all sorts of odd places.

Mr. R. Reynolds exhibited a model of stirring apparatus, worked by steam, and originally designed for use in making extract of cinchona. The crank motion of the steam-engine



is converted into backwards and forwards motion by means of linkages, and the actual stirrers are half-moon shaped, so as to agitate thoroughly the liquid at the bottom of the evaporating-pan.

Maw's glass apparatus for collecting precipitates is a pretty little instrument for quickly collecting small portions of a precipitate. A cylindrical precipitating glass is fitted with a little cup, which slides easily in it. A long glass rod is fixed like an umbrella-handle to the centre of the cup and a disc of glass with a hole in the middle slips along the rod. The cup is placed at the bottom of the cylinder; the fluid, with the precipitate in suspension, is poured in and allowed to deposit. The precipitate, or the greater part of it, collects in the cup, which is withdrawn by means of its glass handle, the disc previously dropped over it preventing loss by the disturbance of the fluid.

Messrs. J. B. Shillcock & Son showed their patent leech-vase and safety poison-labels.

Mr. J. B. Corsan, of the London Sand-blast Works, showed some

handsome advertising tablets and bottles engraved and enamelled by the sand-blast. Messrs. H. Poths & Co. exhibited bottles and jars labelled prettily and neatly with enamelled letters burnt in and on the surface. Descriptions of goods like these are useless without coloured illustrations. The goods of both firms are far more permanent, and in some cases handsomer, than the ordinary black on gold paper label.

Pond's Extract Company showed a simple enema with vaginal dilator, which ensures the contact of the injection with every part of the mucous membrane.

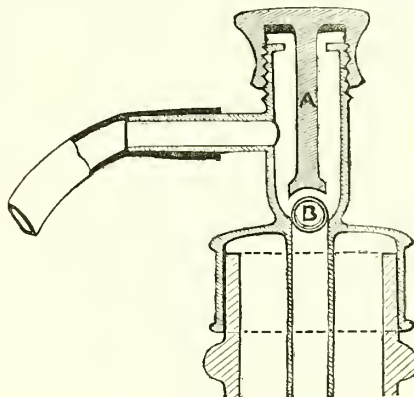
Messrs. Allen & Hanburys exhibited only a small vapouriser for cresolene and other medicaments.

Messrs. Arnold & Son had a large show of surgical and medical apparatus. The "Desideratum" knife and fork for persons with only one available hand we illustrated last month. A human-hair-clipping instrument is a horse-clipper in miniature, and cuts the hairs about an eighth of an inch from the scalp. Johnson's new section knife is a razor with a fine solid handle and a blade ground very con-

cave on both sides, and perforated so that it can be screwed to the section table. India-rubber bandages free from sulphur were shown. They have proved remarkably efficacious in the treatment of certain skin diseases.

Vaccination-shields were shown by Mr. William Cowan and Messrs. Bourne & Taylor. Messrs. Arnold & Son showed an "instantaneous vaccinator," in which touching a spring produces at once two or three scarifications.

A simple improved feeding-bottle was shown by Dr. E. O. Day. Stopper, teat, and tube are made of rubber in one piece, and, therefore, are easy to clean and hard to lose. George Wells' improved feeder, another ingenious and simple device, is illustrated in the accompanying block. The metal cap fits over the ground neck, and the screw-top, A,



closes or loosens to any desired degree a valve which regulates the flow of milk. Messrs. Maw, Son & Thompson showed a full series of their feeders and the various accessories lately introduced, such as their new teat-holder and bottle-cord, which have been already noticed in these columns.

Messrs. Bourne & Taylor showed a new adhesive plaster which will adhere to bleeding wounds and will not harden. A new patent funnel was shown for filtering volatile fluids, with ground edge for receiving a glass cover and internal air-tube. This firm also exhibited a variety of medical and electrical appliances.

Messrs. Harvey, Shepherd & Co. showed some pretty water-jugs of crackled glass, ornamented with butterflies and flowers of coloured glass, in positions which no butterfly or flower in its senses ever assumed. Their ink pills are a convenient invention; on dissolving them in water ink ready for use is obtained. Mather's porous plasters of various kinds were a feature of this display.

Jahncke's handsome metallic boxes attracted much attention.

Martindale's portable and poor man's inhalers are simple and practical devices.

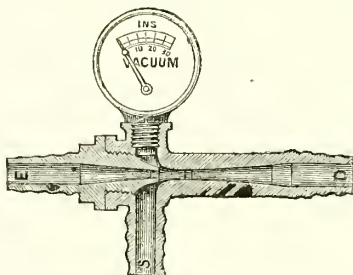
Price's Patent Candle Company showed a handsome case of their products, which could be looked at, not examined. Coco oleine, recommended many years ago for consumption: hard acid, from shea butter and from the grease recovered from wool during washing were noticeable here. A fine series of photographs of the microscopical appearances of mixtures of palmitic and stearic acids was shown, the series being complete in steps of 1 per cent. from pure palmitic acid to 41 palmitic with 59 stearic acid.

Dr. Symes, who had much interested himself in this exhibition, had brought together the following:—

Körting's Water-jet Vacuum-pump: A simple apparatus for producing an almost perfect vacuum, by means of a jet of water issuing from an opening $\frac{1}{4}$ inch diameter, with such velocity as to draw the surrounding air with it through the waste-pipe. 2. Royle's Patent Self-filtering Filter (for filtering from the water-pipe): The ingenious part of the appliance is the self-fitting arrangement, whereby it can be instantly adapted to almost any water-tap; the india-rubber collar being operated on by the water pressure, prevents the possibility of its removal whilst the flow continues. 3. The Urethral Irrigator, as constructed for Mr. R. Harrison, and illustrated in his work on the urinary organs. It consists of a small Higginson's enema apparatus, to which is attached a

MAW'S GLASS APPARATUS.

soft rubber catheter, made under the patent of Messrs. Tiemann, of New York. The eye being formed in the mould instead of being cut subsequently, it prevents sharp edges to cause irritation. 4. Medical Batteries of English and French construction. 5. Soluble Bladder Pessaries: These are prepared of cocoa butter, and medicated with various substances. In use, one of these is placed in the end of a special catheter, which ejects it from this position on reaching the bladder. 6. Mould for preparing above. 7. Dr. Imlach's Electric Appliances, for use in Partial Paralysis,



KÖRTING'S WATER JET VACUUM-PUMP.

&c.: An ingenious arrangement by which the motion of the patient applies the electric current; making and breaking contact at the moment when the muscles are required to contract and expand. 8. Dr. Cauty's Patent Poultice: Consisting of a sausage-shaped indiarubber bag, with spongiopiline on one side. In use the spongiopiline is moistened, and the bag is filled with hot water, by which means the temperature is maintained much longer than in an ordinary poultice. 9. French Enema: Working with two cylinders (similar in appearance to an air-pump), whereby a continuous flow of the fluid is maintained. 10. American Fountain Enema: This consists of an indiarubber bag, with long tubes attached, and the bag is hung up above the patient, the force being applied by hydrostatic pressure.

CHEMICALS AND DRUGS.

Camphor in tablets was conspicuous in the room devoted to chemicals. It was exhibited by Messrs. May & Baker, and George Atkinson. The American article, sublimed into flat cakes and then sawn into tablets, was shown by Messrs. Evans & Co., of Liverpool, but it is less transparent and solid in appearance than the English. Messrs. May & Baker sublime the camphor direct into moulds, on which, if desired, the name and address of the retailer can be engraved. A year or two ago a machine for subliming this tablet camphor was sent to Japan by an American, but its use has been abandoned because of the great loss from unskilful manipulation, and from the evaporation of the tablets during shipment.

Messrs. Corbyn, Stacey & Co. showed fine specimens of new drugs and preparations. *Adonis vernalis*, the herb in a fine state of preservation, was perhaps the most novel. This plant used to be a favourite flower before the modern ribband gardening came into fashion, and among many similar names it was called red morocco and red camomile.

Messrs. Burroughs, Wellcome & Co., representing a number of American houses, also went into the business with zest, and one of the firm was generally on hand to expatiate on the luxuries displayed. Their chief novelties

EXACT SIZE OF TABLET.



were the capsuled pills of Messrs. McKesson & Robbins, of New York. These are of ovoid form and of just the size to contain the required dose. The capsule dissolves in the mouth within about 30 seconds, which, however, leaves ample time to swallow the medicine without tasting it, no matter what its nature. They have a great variety of formulæ in stock, and the "McK. & R." pills have already attained considerable popularity in this country. It is obvious that in these capsules the properties of the medicines are retained in perfect condition indefinitely, while

the solubility of the covering is readily tested. Messrs. Burroughs, Wellcome & Co. also showed Wyeth's compressed tablets, the Kepler malt extract, and its combinations, Lauman & Kemp's Florida water, Hazeline, a preparation of the witch hazel (*Hamamelis Virginica*) and certain apparatus referred to elsewhere.

Messrs. Evans, Sons & Co., of Liverpool, and Evans, Lescher & Webb, of London, were handsomely represented in several departments. Besides their Monserrat lime juice and Vin Santé, which, as we have said, were on draught in the tap-room, they had a varied set of Savar's specialties, such as feeding-bottles, pomades, plasters, soaps, &c., among the sundries. Samples of corn-plasters, adhesive without moisture or warmth, were here being given away. Above they showed a great number of pharmaceutical preparations and chemicals. Prominent among these was a series of ointments, all prepared with their popular hydro-carbon "fossilene" as a basis. An extensive assortment of beautifully-coated pills, and various nauseous medicines enclosed in membranous capsules *à la Savaresse*. Specimens of their materia medica cabinets were also on view.

Messrs. Huskissons' exhibit was an admirable shibboleth. The large flask of fine prismatic crystals of phosphoric acid was handsome, but not particularly remarkable to the uninitiated. Practical chemists, on the other hand, saw in it the great feature of the exhibition. It was rumoured that only a day or two before had the trick of inducing this acid to crystallise been discovered, and cynical observers believed that even the exhibitor would be unable to produce another specimen, happy accident being responsible for the one before them.

Mr. A. W. Gerrard showed three interesting series of specimens illustrating the manufacture of atropine, duboisine, and hyoscyamine, showing the crude drug and the alkaloid in various stages of its progress towards purity. Here, again, the unpractical observer gains no idea of the time and trouble represented by each step in the process.

Messrs. Burgoyne, Burbidges & Co. exhibited some artificial flavours and perfumes and a substitute for cod-liver oil. The same firm showed, for Messrs. Parke, Davis & Co., of Detroit, some good specimens of the American drugs and fluid extracts which are beginning to attract so much attention here as in the United States. These have since been presented to the Museum.

Among the harmless colours, essential oils, and artificial essences which formed the staple of Messrs. W. J. Bush & Sons' exhibit we noticed oil of sandal-wood, prepared from the Cochin China tree, and said to possess more powerful medicinal properties than any other.

Messrs. Christy & Co. showed, as always, the newest drugs and alkaloids. *Euphorbia pululifera* is a remedy for asthmatic complaints used by the Australian natives. The first notices of it appeared in English papers only last month, when we republished the information among our Foreign Notes. Specimens of it were shown by Messrs. Christy.

The Clayton Aniline Company showed some preparations which the pharmacist rarely sees. Among them were some nearly colourless essence of mirbane for perfumery, which ought to be useful for toilet articles, and some good specimens of the chlorates of sodium and barium.

Chloricalcium was exhibited by Mr. A. B. Cortis, of Worthing. We noticed it fully last month.

A very striking novelty was exhibited by Messrs. Young & Postans, on behalf of Messrs. Hamilton, Less & Co., of Dublin. This was a new system of plating with galena, or lead sulphide, the depositing agent being sulphocarbamide or sulpho-urea. Two glass vases, coated one internally and the other externally in this manner, were very handsome in appearance. The article to be plated is immersed in a bath containing the sulpho-urea and a soluble lead compound; a firmly-adherent layer of brilliant steel-grey galena is deposited after some time, and must be polished with leather. This process was devised or discovered by Professor J. Emerson Reynolds.

Messrs. Morson & Son exhibited some fine chemicals, including a long series of salicylates. The new chologogues, euonymin, iridin, leptandrin, and ammonium benzoate were also shown.

Spirit of wine, free from fusel oil, was shown by Mr. J. Burrough, of Cale Street.

The Pharmaceutical Council.

THE first meeting of the new Council was held on June 1. All the members were present except Mr. Schacht, who, the President said, was on the Continent in consequence of his wife's health. After reading the minutes of the past two meetings, the Secretary read letters.

From Mr. G. D. Mackay, Edinburgh, in acknowledgment of the vote of the Council concerning the late Mr. John Mackay.

From Mr. J. R. Young, Edinburgh, accepting his appointment to the Council in place of the late Mr. John Mackay.

From Messrs. Lyon Playfair and Michael Foster and Professors Attfield and Russow, acknowledging their appointments as "honorary and corresponding members." All expressed their sense of the high honour thus conferred upon them, and their consequent gratification.

ELECTION OF OFFICERS.

A ballot was taken for the appointment of President for the ensuing year, which resulted in the unanimous election of Mr. Greenish.

For Vice-President the following votes were given:—For Mr. Schacht 13, for Mr. Atkins 5, for Mr. Hampson 1, for Mr. Churchill 1.

Mr. WILLIAMS moved, and Mr. SAVAGE seconded, the re-appointment of Mr. Robbins as Treasurer. Mr. CARTEIGHE, however, remarked that he should think the Treasurer would esteem the compliment higher if the election were taken by ballot in the ordinary manner. From his experience on the Council 11 years since, he considered that it might lead to inconvenience unless the principal officers were thus elected. After a short discussion a ballot was taken, when 17 votes were given for Mr. Robbins and 3 for Mr. Hampson.

Messrs. GREENISH and ROBBINS briefly acknowledged the honours paid them.

THE STANDING ORDERS

For regulating the discussions of the Council were then read and adopted for the forthcoming year.

THE SCOTCH BOARD OF EXAMINERS

On the motion of the PRESIDENT, the Chairman of the Scotch Board of Examiners was requested to undertake for the future the duties of Secretary to the Board, hitherto fulfilled by the late Mr. Mackay. The resolution also recorded the Council's sense of the value of the services rendered by Mr. Mackay in this respect.

SECRETARY AND ASSISTANT SECRETARY.

Mr. Elias Bremridge was appointed Secretary and Registrar, and Mr. Richard Bremridge Assistant Secretary and Deputy Registrar for the ensuing year.

EXAMINERS.

A vacancy occurred on the Scotch Board of Examiners in consequence of Mr. Young's appointment to the Council, and a vacancy occurred on the English Board in consequence of Mr. Carteighe's election to the Council. The Council went into Committee to discuss the appointment, and on Mr. Carteighe's motion, after discussion and division, reporters were required to withdraw. The following appointments, subject to the approval of the Privy Council, were made:—To the Scotch Board, Mr. Henry Belyse Baildon, B.A., Edinburgh; and to the English Board, Mr. John Clough Thresh, Buxton.

THE ELECTION OF MEMBERS

And Associates was then proceeded with, and the Registrar reported that the name of Charles Jackson, South Street, Chesterfield, had been added to the register, he having fulfilled the required formalities.

FORMAL BUSINESS.

Committees were next arranged. Dr. Paul was re-appointed editor of the *Journal*, and Mr. Passmore sub-editor, and Mr. Holmes curator of the museum. The

appointment of local secretaries was adjourned for a month. The SECRETARY said votes for local secretaries had been received from 211 towns, and there were 97 other towns entitled to a local secretary from which no vote had been received.

FINANCIAL.

Messrs. Andrews, Atkins, and Savage had acted as a Finance Committee during the interval between the Councils. Their report of payments ordered was adopted.

Mr. ROBBINS stated that they had now a large balance in hand, and he suggested that 1,500*l.* should be either invested in consols or placed on deposit with the Bank. They would get about 1½ per cent. if they deposited. Consols were very high just now.

Mr. WOOLLEY asked if their broker could not find them some better interest than 1½ per cent. for money deposited at call.

Mr. RICHARDSON asked if they had power to invest otherwise than in consols? There were some corporations which offered 3½ or 4 per cent., and they were as safe as the Bank of England.

The SECRETARY said the Council could invest the funds as they pleased.

Mr. BUTT said it must be in Government securities.

Mr. ROBBINS said if they had invested their money in land some years ago the Society would now have been very rich. That, however, was not the present question.

It was resolved to place the 1,500*l.* on deposit.

HOUSE.

The report of this Committee stated that the tablet of the list of prizemen was being prepared, and referred to painting and repairs.

Some conversation ensued as to the possibility of getting a wood pavement laid in Great Russell Street, so as to add to the comfort of the Council meetings. The SECRETARY said the Board would not consider the matter until the present stone pavement was worn out.

THE LIBRARY, MUSEUM, AND LABORATORY REPORT

Comprised a record of a few donations, but gave rise to no discussion.

THE EXHIBITION COMMITTEE

Also reported as to the steps that had been taken in connection with the exhibition.

THE INTERNATIONAL PHARMACEUTICAL CONGRESS.

A report was received from this Committee. It appeared that including the 100*l.* voted by the Council, 302*l.* had already been promised towards the expenses. Invitations had been sent to Dr. Lyon Playfair and Professor Russow. Mr. R. Bremridge had been appointed treasurer. Mr. Barclay had suggested the discussion of the relations of pharmacists to medical men, and Professor Attfield had offered a paper on Pharmaceutical Education. The Committee had appointed a sub-committee to arrange for interpreters.

BENEVOLENT FUND.

Three grants amounting to 40*l.* were recommended by the gentlemen who had acted for this Committee, and their recommendations were adopted.

THE SESSIONAL ADDRESS.

After a discussion in committee Dr. Symes was requested by the Council to deliver the address to students at the opening of the session.

Dr. SYMES said he accepted the appointment with much diffidence, but as it seemed to be the wish of the Council he would do his best, and he hoped they would not be disappointed, though he feared they would.

THE CORONER AND THE PHARMACY ACT.

The PRESIDENT said that, having seen a report of some remarks made by Dr. Danford Thomas, the new Middlesex coroner, in regard to the sale of some oxalic acid, which showed that that gentleman had misunderstood the distinction between poisons of Part I. and Part II. of the Schedule, he had asked Mr. Bremridge to write a letter drawing his attention to the error. The coroner had replied, thanking

the Secretary for the information, and stated that he had been guided in his reading of the Act by a clerk from the druggist who had sold the poison, who he supposed was acquainted with the Act.

CIRCULATION OF THE JOURNAL.

The PRESIDENT stated that, as a question as to the circulation of the journal had been raised at the annual meeting, he had had a correct statement prepared, which showed that with members, associates, apprentices, life members, free copies, and average sales, a circulation of 7,000 was very nearly made up.

THE JAMAICA PHARMACY LAW.

The Colonial Office had sent to the Council a copy of "The Sale of Drugs and Poisons Law, 1881," passed by the Legislature of Jamaica, and now awaiting the Royal assent.

We gave details of this Act last month (page 209). The Colonial Secretary now asked the Council of the Pharmaceutical Society to favour him with any observations on the law which might occur to them before it received Her Majesty's sanction.

The PRESIDENT said he supposed the Council would refer the consideration of this law to the Pharmacy Act Amendment Committee.

Mr. SYMES remarked that the law was stated to come into operation on July 1, so that no time was to be lost.

The PRESIDENT and others strongly urged that it ought to be considered by a committee, and Mr. HAMPSON moved that power be delegated to the Committee to reply to Lord Kimberley. Mr. RICHARDSON and Mr. FRAZER opposed delegation of the power of the Council to any committee. Mr. YOUNG said that the agenda paper stated that they were to consider the matter, and it was probable that if they were to go through it there would be no difference of opinion. Mr. SYMES said it would probably be only a matter of half-an-hour for the Council to consider it. Mr. ATKINS, however, urged that it was a subject which could be much better examined by a committee. The bill was ultimately referred to the Pharmacy Act Amendment Committee, and authority was given to them to reply to Lord Kimberley.

MESSRS. HILLS AND SANDFORD.

In accordance with notice, Mr. SAVAGE moved that—

The members of the Council desire to express their sincere regret at the retirement of their esteemed colleagues, Mr. Sandford and Mr. Hills, and to record their high appreciation of the services they have rendered to the Society for so many years. The Council ventures to hope that the Society in its efforts to promote the best interests of pharmacy may still continue to receive their valued advice and assistance.

The speaker at some length described the services of the two gentlemen named on the Council and as Presidents of the Society. Mr. Sandford was first elected in 1854, and Mr. Hills in 1861.

Mr. BOTTLE seconded the motion, and eulogistic speeches were made by Messrs. Robbins, Hampson, Atkins, and Frazer. The motion was carried unanimously.

THE PHARMACEUTICAL EXHIBITION.

Mr. SYMES moved for the appointment of an Exhibition Committee, and Mr. RICHARDSON seconded the motion, introducing some little asperity by suggesting that the members to be appointed should be such as had the success of the exhibition at heart. He feared the last Committee had hardly carried their work through as a labour of love.

The PRESIDENT thought it was necessary to decide whether an exhibition should be held before they appointed the committee.

Mr. SYMES thought it would be the first work of the committee to decide whether one should be held every year, every other year, or triennially. Ultimately the view of the President prevailed, and Mr. Symes withdrew his motion and gave notice of another to the effect that an exhibition be held next year.

CORRESPONDENCE.

Letters were read from the editor of the "Kew Gardens Official Catalogue," thanking the Society for the loan of certain engravings; from Dr. Hogg, of Paris, asking for information respecting pharmacy in this country; and from

the Secretary of the British Association, stating that it was proposed to hold an exhibition at York to illustrate the progress made in the manufacture of scientific instruments during the past 50 years.

Pharmaceutical Society of Ireland.

MEETING OF COUNCIL, JUNE 1, 1881.

PRESENT: President, Professor Tichborne; Vice-President, Dr. Aquilla Smith; Messrs. Allen, Brunker, Collins, Draper, Grindley, Harrington, Hayes, Hodgson, and Payne.

The minutes having been read and confirmed,

The Council proceeded to consider Mr. Hodgson's notice of motion—

That a sum of 100*l.* be invested in Three per Cent. Stock.

The PRESIDENT suggested that, as Mr. Hodgson was not present, some member should propose his motion for him.

Mr. DRAPER thought that the present price of consols was so high that it would be advisable to invest in some other security.

Mr. GRINDLEY had come intending to move an amendment to that effect, and asked were they bound to invest in Government securities.

The PRESIDENT considered that, as trustees, they would be obliged to do so.

Mr. HODGSON, having arrived, said he had since last meeting balanced the accounts, and found that, after deducting amount required to meet outstanding accounts, the working balance would be too small; he therefore considered it not advisable to invest at present.

The PRESIDENT called attention to a former resolution requiring all sums invested to be in the names of three members.

Mr. BRUNKER asked if the three were not the President, Vice-President, and Treasurer.

The PRESIDENT replied that it was so.

The motion, amended by adding "at first available opportunity," was proposed by Mr. HODGSON, seconded by Mr. DRAPER, and passed.

Mr. PAYNE then proceeded with his notices of motion. The first was intended to define the meaning of the clause requiring candidates to have been practically engaged for two years in compounding and dispensing in the establishment of a pharmaceutical chemist or apothecary. Mr. Payne proposed to add the words:—

That they have devoted the whole of their time to the practice and study of pharmacy in his establishment.

He also proposed

That candidates for the pharmaceutical examination be required to send their certificates of practical pharmacy and practical chemistry 14 clear days before presenting themselves for examination.

And

That a committee of three be appointed to examine the certificates of candidates presenting themselves for the pharmaceutical examination, whose duty it shall be to instruct the Registrar if the certificates do not conform with the regulations of the Council.

He said the Council would recollect that there was no rule in the Society at first requiring practical pharmacy, and that subsequently a regulation requiring two years' practice had been passed. The intention at that time was that the whole time should be given. Some, however, had considered that if a student attended an hour a day it would be sufficient. He was acquainted with a gentleman who had a student attending an hour a day and one or two hours during the evening. He had remarked it, and the reply was that there was no rule to the contrary. He considered that it should be made clear that the two years should be altogether spent in the practice or study of pharmacy. He had brought the matter before the Council in November, 1880, and now again brought it forward, with some alterations. He considered that all the certificates should be examined. Last year a candidate had sent a certificate, which had been allowed, of an apothecary who had not for certainly twelve

years an open shop or dispensary of any kind, and for that reason he had proposed a committee and suggested that a member of Council in Dublin, Belfast, and Cork should form the committee.

The VICE-PRESIDENT suggested a committee in Dublin which could refer to the country members for information.

The PRESIDENT, while concurring with the intentions of Mr. Payne, thought that as proposed it would be impracticable.

Mr. HODGSON had no personal interest in the matter, not having compounding upon his establishment. He had no experience of what apprentices were required to do, but thought that under the new rule, if passed, no time for lectures could be allowed, his recollection being that in the Apothecaries' Hall the assistants and apprentices were allowed time, and he considered that if the candidates had not learned compounding that the examiners would know how to treat them.

Mr. HAYES considered such a rule arbitrary. He took apprentices for five years, and none under, but would not be able to conscientiously sign a certificate under such a stringent resolution.

The VICE-PRESIDENT said that Mr. Payne's other proposals were desirable, but he did not think his first suggestion was practicable.

Mr. GRINDLEY thought it was not hard to ask a student to say he had not been employed in one establishment and learnt pharmacy in another.

Mr. DRAPER said in his opinion it would be utterly impossible to carry out such a rule, and was fully convinced that a student would become a compounding automaton. He believed that he might as well propose a two years' course of practical chemistry. The Pharmaceutical Society of Great Britain had no such rule.

The PRESIDENT proposed that the second and third proposal should be tried for a year, and the first be allowed to drop, and that a committee of five, three for Dublin and one each for Belfast and Cork, be substituted for a committee of three.

Mr. HARRINGTON totally disagreed with Mr. Payne.

Mr. BRUNKER said that Mr. Payne had brought the matter forward in consequence of some questions asked at the annual meeting. He believed what was required was an interpretation clause: he thought that to any sensible person the regulation as it stood could have but one meaning, and that the Privy Council would not pass it.

The PRESIDENT called upon Mr. Payne to proceed or withdraw.

Mr. PAYNE said his motions were intended entirely for the benefit of the Society. The Pharmaceutical Society of Great Britain required three years' apprenticeship, and during that period the whole time was required. It was his intention to prevent persons who were six or seven hours a day at some business not connected with pharmacy obtaining certificates, but, seeing so much opposition, he would withdraw the first proposal.

The other proposals were passed, with the amendment of a committee of five: Messrs. Allen, Brunker, Collins, Harrington, and Payne.

Mr. BRUNKER proposed, and Mr. PAYNE seconded—

That it be an instruction to such committee to satisfy themselves that the certificates granted guarantee a *bona fide* engagement in the regular work of a pharmacy during the period.

This was passed without dissent.

The motion proposed by Dr. COLLINS, seconded by Mr. GRINDLEY—

That on July 1 of each year the Registrar of the Pharmaceutical Society be instructed to send a printed form to all the medical schools approved by the Privy Council, for a return of all the pharmaceutical students registered with them during the session then ended—

passed unanimously.

The meeting then adjourned.

SILICATE OF SODA (soluble glass) is largely used abroad in the manufacture of cheap soaps. A concentrated solution is incorporated with fatty soaps. It has properties similar to other soaps, but is much cheaper.

Metropolitan Reports.

FIRE AT MESSRS. BRYANT & MAY'S MATCH MANUFACTORY.—Considerable alarm was occasioned on May 30 by a report that the Fairfield Works, Fairfield Road, Bow, were on fire. The extensive premises are occupied by Messrs. Bryant & May, the well-known match manufacturers. When the first engine arrived the flames had already obtained a firm hold of the place, and there was every indication of a terrible disaster. In a very short space of time four steam-engines, one manual, and a hydrant were engaged in directing a strong force of water on the fire. For several hours the firemen continued their labours, and owing to their exertions other portions of the works and the adjacent properties were preserved. The principal damage appears to have been confined to a brick building, one or two floors of about 200 feet by 70 feet being burnt out and the roof of the place destroyed. Other portions of Messrs. Bryant & May's property also suffered. The cause of the fire is unknown. There was no insurance on the works, owing to the dangerous character of the materials. We are requested to state that the execution of orders by the firm will not in any way be interfered with.

SUICIDE OF A CHEMIST.—On May 12, Dr. Danford Thomas, coroner for Central Middlesex, held his first inquiry in that capacity at the Railway Hotel, New Southgate, as to the circumstances attending the death of Mr. Edmund Henry Ombler, aged 43, a chemist and druggist, of 8 Southgate Place. Harriet Fordham, domestic servant to deceased, deposed that she last saw deceased alive on the morning of May 10 between seven and eight o'clock. He was generally very dull, but on the previous day he went up to London to vote at the election for coroner. When he came back, and up to the time he went to bed at ten o'clock, he appeared in better spirits. Shortly before eight o'clock on the 10th, her mistress met her on the stairs and asked her where her master was, and she told her she had seen him come down, and she thought he might have gone out; but on going into the drawing-room she found her master lying on his face on the rug. She raised an alarm, and ran downstairs for Mr. Jenkins. Mr. Evan Jenkins, assistant to deceased, said he had just returned from his morning's walk when he was called by last witness and found deceased on the rug in the drawing-room dead. A bottle with prussic acid about half full, and stoppered, was on the mantelshelf by the side of a measuring-glass. He at once saw what had happened, and ran for the medical man. Dr. Beedles said he had attended deceased for some time for weakness of heart and rheumatics in the head. He was sent for about nine o'clock, and found deceased as described, the symptoms indicating death from prussic acid, a teaspoonful of which would have been sufficient to cause death. The coroner observed that he perfectly recollected seeing deceased at the polling-booth at Islington on May 9, and shaking hands with him. The jury ultimately returned a verdict that deceased died from the effects of prussic acid, self-administered, whilst in an ununsound state of mind.

FRAUD AND FORGERY.—At the Central Criminal Court on May 24, Charles Maples, 40, chemist, whose case was mentioned in our last issue, pleaded "Guilty" to forging and uttering receipts for the delivery of goods with intent to defraud Mr. Charles Maw and several other surgical-instrument makers. He was sentenced to five years' penal servitude.

STEED V. ARABIN.—This was an action, heard at the Lambeth County Court on June 1, to recover 4*l.* for medicine supplied to the defendant's wife. Mr. H. W. Ody appeared for the plaintiff, a chemist in Wandsworth Road, and Mr. Lickfold appeared for the defendant, a gentleman residing in Grosvenor Square. It appeared from the plaintiff's evidence that he had made up the prescriptions of sundry doctors who attended on defendant's wife. Mr. Lickfold said that defendant was living apart from his wife, a deed of separation having been executed on condition that the latter was allowed 24*l.* a year for her maintenance. Notwithstanding this, bills had come in from wine merchants, hotel-keepers, and other tradesmen, which defendant had paid to avoid annoyance, but he had recently determined to make a stand against any further persecution in respect

of his liability for his wife's debts, inasmuch as she had an ample allowance if she chose to make a good use of it. His Honour said that had the claim been one for jewellery or any article of extravagance he might have been disposed to give judgment in his favour, but as the defendant had admitted his income amounted to several thousand pounds a year, and looking also to the fact that the present claim was for "necessaries," he should give judgment for the amount claimed, with costs.

Provincial Reports.

BELFAST.

ALLEGED ADULTERATION OF MUSTARD.—An information under the Sale of Food and Drugs Act had been preferred at Belfast against a grocer for selling a parcel of mustard alleged to have been adulterated with flour, although sold as being pure mustard. The report of the local analyst certified to adulteration; but Messrs. J. & J. Colman, the manufacturers, demurred to the correctness of the analysis, affirming that any package of mustard issuing from their factory, whether in the form of an admixture or genuine mustard, carries a direct and legible notice on the label, declaratory of the nature of the contents, in conformity with the requirements of the Act, and that this course is invariably followed in the conduct of their business. The magistrates adjourned the case for the purpose of submitting the original sealed sample in the custody of the Court to Somerset House for official analysis. Upon the adjourned hearing, the Government analyst's report was produced, testifying to the absolute purity of the sample of mustard. The case was, of course, dismissed.

CHESTERFIELD.

CHEMISTS AND THE EXPLOSIVES ACT.—On June 2, at the Chesterfield Borough Police Court, Messrs. Abraham Greaves & Son, chemists, were summoned by Major Ford, Inspector under the Explosives Act, for having committed three separate offences under the Explosives Act.

The first charge was that the defendants on May 19, being occupiers of registered premises under the provisions of the Explosives Act of 1875, kept explosives exceeding 1 lb. weight, the same not being enclosed in substantial cases, bags, or canisters, so as to prevent them from escape, as required by the Act. The second charge was that they kept, on their registered premises, an amount of powder exceeding 50 lbs. in weight, the amount found on the premises on the 12th ult. being 317 lbs., which was not in a substantially constructed building exclusively appropriated for the purpose. The third charge was that the defendants, being occupiers of registered premises under the Explosives Act, 1875, did not take all due precaution for the prevention of accidents by fire or explosion.

Major Ford said that on May 19 he had occasion to call on Messrs. Greaves with reference to their factory at Grassmoor. Witness went down their yard in the Market Place and found, lying close to the door of one of the warehouses, firstly, a barrel containing 100 lbs. of powder, a box containing 12 lbs. of blasting cartridges, one containing 25 lbs. having been opened. He proceeded to the building at the bottom of the yard, and in which defendants kept the explosives. This building, from its situation, would be only qualified to hold 50 lbs., but 145 lbs. were stored in it—95 lbs. in excess of the proper and lawful amount. Witness ordered the 95 lbs. and the other 192 lbs., in all 267 lbs., to be put under seizure. Loose powder and a box of cartridges were standing open near the door of the warehouse in the yard. Anyone smoking would pass within a foot or two feet of the powder, and within a very few feet of a large quantity of petroleum, amounting to 36 barrels, in addition to which there was a quantity of other oils. There were also a number of empty barrels which had contained inflammable substances. If by any means a fire had taken place the petroleum would have run down the yard, which inclines, and conveyed the flames to a number of houses

down the yard, and no one knew where else. He wished to say with regard to the excess—192 lbs.—which was found at the door of the warehouse, that it was the powder to which the charge of carelessness referred.

Mr. Greaves claimed that the local authority had registered the magazine to hold 200 lbs., but Major Ford said the local authorities only registered the building, and did not settle the weight to be kept.

Mr. Greaves further argued the matter, maintaining that no wilful offence had been committed. He had never seen the statute, and he felt that the authorities had not published the regulations as they should do.

Major Ford said that the statute under which proceedings were taken had been published in the *Gazette*, and could be obtained for 1d.

Mr. Greaves said he had been in business 45 years, with no explosive mishap. It was in his own interest to avoid any explosion or occurrence such as had been suggested by Major Ford.

After further discussion the Bench consulted a short time, and inflicted a fine of 10*l.* and costs (the powder not to be forfeited), which Mr. Greaves remarked was, in his opinion, excessive.

DUBLIN.

GREAT FIRE.—At 6 A.M. on May 21 a fire broke out in the wholesale drug establishment of Messrs. M'Master, Hodgson & Co., Capel Street, Dublin. The premises were very extensive, and were enclosed in a block of houses in one of the most crowded parts of the city. Oils, paints, varnishes, and petroleum formed a large part of the stock. The conflagration was, therefore, very rapid, and by 10 o'clock the whole premises were destroyed. The damage done was estimated at 30,000*l.*, covered by insurance. Several adjoining properties were seriously injured. The firm has since carried on business without serious interruption at their mills at Ashtown and at their other establishments in Dublin.

GLASGOW.

MALT VINEGAR.—On May 18, George Lindsay, grocer and provision merchant, Glasgow, was summoned before Sheriff Balfour on the charge that he had sold a mixture of acetic acid and water as malt vinegar. Dr. Clark, city analyst, said he had analysed the article, and found that it was not malt vinegar, but it was difficult to say how it had been made. Probably it was simply 5-48 per cent. acetic acid diluted with 95 per cent. water. Professor Dittmar, of the Andersonian University, was examined, and stated that it was extremely difficult to distinguish distilled malt vinegar from pure acetic acid and water. He had made the subject a special study, and found that Fehling's reagent answered this purpose. With reference to the value of dextrine in malt vinegar, it was not very essential, and he considered it was a matter of taste. Phosphoric acid was not a valuable ingredient in vinegar, neither was potash.—On May 30 the case came again before the Court, and the Sheriff, in passing sentence, thought the case was one for a nominal penalty, as the vinegar had been supplied to the retail dealer duly labelled as malt vinegar. He therefore inflicted a fine of 1*l.*

THE GLASGOW APOTHECARIES' COMPANY'S BOAT CLUB.—The annual boat race between employes of the Glasgow Apothecaries' Company—retail and wholesale departments—took place on May 21, at 7 A.M., the course chosen being from Rutherglen Bridge to the Suspension Bridge. After an exciting race the representatives of the retail department won easily by about four lengths, adding one more to their numerous victories. The whole course during the race was watched with considerable interest by a numerous company of friends and others. The crews were as follow:—Retail—Chalmers, Houston, Stewart, and Fleming. Wholesale—Robertson, Campbell jun., Reid, and Law.

LIVERPOOL.

FRASER v. THE POROUS PLASTER COMPANY.—In the Court of Passage, on May 23, James Fraser, printer, claimed 36*l.* from the Porous Plaster Company of the city of New York, represented by Mr. H. D. Brandreth. The plaintiff prints tickets for the tramway companies, and he agreed with the defendants to have their advertisement on the

backs of those tickets. The question was whether the plaintiff had kept his agreement. He contended that he had; that the defendants had the exclusive right of the advertisement on the back of the ticket for the time agreed upon, and that he was entitled to the amount claimed. The defence was that the plaintiff had broken his contract; that the defendants had not the exclusive advertising on the tickets, for that during the period it was arranged they should have it there appeared on the tickets the advertisement of Brown, Barnes & Bell. The jury found for the plaintiff for 18*l*.

LONGTON.

AT Longton, Staffordshire, Mr. John Goldstraw, grocer, was charged with selling ground ginger which on analysis was found to contain 20 per cent. of ground rice. A fine of 5*s*. and costs was imposed.

MANCHESTER.

SALE OF PAREGORIC.—At the Hyde Police Court, on May 19, John Wyld, of 27 George Street, was summoned for selling paregoric which the certificate of the Cheshire County Analyst showed to have been adulterated with 25 per cent. of water. Mr. Wild said he did not make the paregoric; he merely sold it as he got it, and the traveller gave him his word that it was pure. The Magistrates' Clerk: You should get that in writing. Mr. Wild: Ah! it's too late now; it's like locking the stable when the horse has gone. If I'm sent for here again, it will not be paregoric that will bring me. (Laughter.) A fine of 5*s*. and costs was imposed.

NOTTINGHAM.

NOTTINGHAM AND NOTTS CHEMISTS' ASSOCIATION.—The annual meeting was held on May 31; the President, Mr. R. Fitz-Hugh, in the chair. The Secretary read the annual report, which showed the association to be increasing, both numerically and financially. There are now 55 members and 29 associates, against 55 members and 25 associates last year. The treasurer's account showed a balance to the credit of the association of 67*l*. 17*s*. 2*d*. Both reports were adopted. The following were elected officers and council for the ensuing session:—President: Mr. R. Fitz-Hugh, F.C.S.; Vice-President: Mr. T. B. Fletcher; Treasurer: Mr. W. H. Parker; Hon. Secretary: Mr. C. W. Warriner; Council: Messrs. Jackson, Wilford, Humphreys, W. Widdowson, White, Bolton, Beverley, and Lewis; Auditors: Messrs. C. Fletcher and A. Beilby. A vote of thanks to the president concluded the meeting.

NEWCASTLE.

FIRE.—A destructive fire broke out at the Redheugh Chemical Works, Low Teams, on June 3. The buildings were completely gutted, the damage, which is not covered by insurance, being estimated at 7,000*l*. to 10,000*l*.

OBAN, N.B.

DESTRUCTIVE FIRE.—About midnight on June 1 a fire broke out on the premises of Mr. Mackercher, druggist, Aird's Place, and, owing to the inflammable nature of the materials stored in the shop, the flames soon obtained a mastery, resulting in the entire destruction of the property.

SHEFFIELD.

HOUSEBREAKING BY A CHEMIST'S ASSISTANT.—On May 17 James Latham Rowney, chemist's assistant, was charged at the Town Hall with having broken into the premises of his employer, Mr. George Dale, chemist and druggist, 3 Main Road, Darnall, and stolen a pair of forceps, a bottle of patchouli, 7*s*. in silver, and 2*s*. 9*d*. in copper. The prisoner was dismissed from his post on May 10, and on the morning of May 12, the shop, which had been securely locked by Mrs. Anstwick, the housekeeper, on the previous night, was found to have been entered, and the forceps and money taken. Entrance had been obtained by the removal of the cellar grate. Suspicion fell upon the prisoner, and when he was apprehended by Police-constable Elston the forceps were in his possession. In answer to the charge he pleaded guilty, and said he was under the influence of drink when he entered the premises. He was committed to prison for one month, with hard labour.

STOURPORT.

ADMINISTERING POISONOUS DRUGS TO HORSES.—At the Petty Sessions, May 24, Henry Mantle, a waggoner in the employ of Mr. John Harris, farmer, of Waresley, was charged with administering poisonous drugs to two horses. Mr. Thursfield appeared for the defence. It appeared that on April 6 prosecutor found three bottles concealed in a corn-bin of which the prisoner had the key. The bottles contained aquafortis, oil of vitriol, and dragon's blood, and prisoner admitted that he had given some of their contents to the horses. Mr. Thursfield said his client gave the drugs to the animals for the sake of improving their appearance and condition. The Bench commented severely upon the practice of grooms and others giving drugs to horses without their masters' knowledge. Many valuable animals were injured, and even killed in that way. They did not believe that the defendant did it with any malicious intent, and on account of that and his previous good conduct they should only fine him 1*l*. and costs.

TAMWORTH.

At the police court May 18, Arthur Gisborne, a young man employed as a traveller by Mrs. Fanny Felthouse, grocer and chemist, Market Place, was charged with embezzlement. His duty had been to solicit orders and collect accounts, and it was shown that he had received several sums which he had not entered in his books. He was sentenced to three months' hard labour.

OLIVE AND COTTONSEED OILS.

WE published last month (page 206) a short note on the importation of American cottonseed oil into Italy, and its use there as an adulterant of olive oil. The United States consuls at Marseilles, Rome, and Florence, under date of February and March, have sent further information to their Government, which is published in the April reports.

The use of cottonseed oil in making white foaming soap was the cause of a great increase in its import into Marseilles after the year 1860. Its price, however, soon rose to that of the ground nut oil it was introduced to replace, and at present it is only used to a small extent, when mixed with palm and coconut oil, in the manufacture of an inferior quality of soap called *savon blanc à froid*, which finds a market in Western France. The oil used in soap factories comes chiefly from the crushing works at Hull. About six years ago American cottonseed oil first appeared in Marseilles, and rapidly grew into favour. The better grades are tasteless, and are used to adulterate olive and other eatable oils. Cottonseed oils congeal at a higher temperature than olive oil, and this offers the only means of detecting the admixture. The manufacturers have met this difficulty by sending oil which retains its fluidity at -5°C . In Marseilles and Italy temperatures are rarely low enough to demand this refinement in adulteration, though the Northern districts will be enabled thereby to adopt this branch of trade.

The Consul-General at Rome reports (March 8) that a Bill, increasing the duty on all forms of cottonseed oil from 6 to 20 lire a quintal, and fixing a tax of 14 lire a quintal on cottonseed oil made in Italy, has passed the Italian Chamber of Deputies, and has been referred to the Senate for confirmation. It is strongly supported by the Italian Cabinet on the ground that the heavy adulteration of olive oil with cottonseed oil for table use is discrediting the Italian olive oil on foreign markets.

The Consul at Florence remarks that, although last year the oil crop was not a large one in Italy, there are on hand now at different shipping ports large quantities of so-called "pure olive oil" awaiting purchasers. In 1877 Italy exported 50,248,900 kilos. of olive oil, but during 1878 and 1879, although I am unable to get at the actual figures, I learn from the best authority that the exports have fallen off greatly, owing to the adulteration with cottonseed oil. The Deputy in the Italian Parliament who introduced the Bill increasing the tax on cottonseed oil stated publicly that unless people could deal directly with the proprietors of the estates growing olives, they would hardly be able to obtain pure olive oil even in Italy.

FORMULÆ OF SECRET MEDICINES.

The Formulæ given below are translated (by special permission of the author) from a German collection compiled by Mr. Edward Hahn, Apotheker. The names following most of the Formulæ are those of the authorities quoted for the analysis. The weights are almost invariably given in metric denominations. A gramme is equivalent to $15\frac{1}{2}$ grains. The prices quoted are the nearest English equivalents to the original retail price.

[g. = grammes; p. = parts.]

STARCH-GLOSS (P. J. Klotten, Köln), makes the starched articles whiter and glossier. Stearin candles coloured sky blue with indigo, perfumed faintly with lavender, and made into oblong cakes. A cake weighing 15 g., 3d.—*Wittstein*.

BAHNSEN'S STEEL WINE (Viel & Co., Utrecht).—This is said by the makers to be a solution of ammonio-tartrate of iron in wine, but in reality is a tinctura ferri cydoniata made without the spirit of cinnamon. 200 g., 8d.—*Wittstein*.

STANGENPOMADE—BAR POMADE (Gustav Markmann).—This is simply soot with fat and tallow.

STEROXYLIN.—A substitute for size in paper making. Syrupy water glass (silicate of soda).—*Hallwachs*.

STETTINER WASSER—STETTIN WATER—is an external application containing corrosive sublimate.—*Hager*.

STEVENS' OINTMENT (Henry R. Stevens, London).—A mixture of lard and suet with 20 per cent. silver iodide.

STOMACHICUM (Oswald Becr).—A 22 per cent. schnapps, containing sugar and the extractive matters of wormwood, orange berries, ginger, zedoary, a little angelica, anise, and peppermint.—*Hager*.

STOMACHIN, Dr. James' (S. Mode, Berlin).—For all stomach complaints. A coarse powder, composed of iron sulphate, 8 p.; white moist sugar, 50; potato starch, 20; vanilla flavoured chocolate, 13; cinnamon powder, 3. 125 g., 1s. 6d.—*Hager*.

SMITH'S STOMACHIN.—A powder containing sugar, 30 p.; potato starch, 56; sweetened chocolate, 12; cinnamon, $\frac{1}{2}$; cloves, $\frac{3}{4}$; sandal wood, $\frac{3}{4}$. 250 g., 6s.—*Hager*.

STRUMPFBÄNDER GEGEN WADENKRAMPF—GARTERS FOR CRAMP IN THE LEGS (Seidel Brothers).—Flowers of sulphur and some vegetable powder quilted into silken ribands.

STUHL BEFÖRDERNDE PILLEN—LAXATIVE PILLS (E. Koeplinger, Würzburg).—A quadrangular box contains eight pills as big as bullets, and weighing 2.5 g., which are composed of about $1\frac{3}{4}$ parts common salt, 1 part wheat meal, and water. 1s. 6d.—*Hager*.

STYPTICUM (Prof. Dr. Cohn).—For all diseases, internal or external, especially syphilis, female, and sexual diseases. Zinc sulphate, 1 g.; gum arabic, 5 g.; spring water, 120 g. 3s.—*Schädler*.

SUPERIOR LILY WHITE (Bazin, Philadelphia).—It consists of chalk and magnesium carbonate, and is free from dangerous metals.—*Chandler*.

SVENSKA SANDDROPPAR (Dr. Gustav Gräfström).—A specific for nervous toothache or neuralgia, prepared by Heinr. Lion, Breslau. Clove oil, 20; cajeput oil, 15; peppermint oil, 5; chloroform, 20; acetic ether, 10; camphor, 2; with sufficient rosanilin to colour it red. 2.5 g., 7d.—*Hager*.

MITTEL GEGEN SYPHILIS—WIEDEMANN'S SYPHILIS CURE.—Water, 100 g.; lead sulphate, 4 g. It is used as a protection from other diseases. 3s.

SIROP ANTIGOUTTEUX DE BOURBÉE (Auch).—A filtered mixture of concentrated sarsaparilla decoction, 20 p.; tincture of gualiacum resin, 15; jalap resin, 2; mustard spirit, 10; thick syrup, 200.

SIROP DE DENTITION—ZAHNSYRUP—TEETHING SYRUP (Delabarre, Prag).—To be rubbed several times daily on the gums. According to Köppen it is saffron syrup. According to Jessler it is a mixture of tinctures of ipecacuanha, belladonna, and saffron, with syrups of manna and rhubarb and clarified honey. 15 g., 2s. 9d.

MISCELLANEOUS FORMULÆ.

SELF-RAISING FLOUR.—Reduce separately, by grinding, to impalpable powders, 1 lb. bicarbonate of soda, $2\frac{1}{3}$ lbs. cream of tartar, $1\frac{1}{2}$ lb. salt. These should be intimately mixed together and then with 100 lbs. fine flour. All of the substances employed should be thoroughly dry.—*Scientific American*.

COMPOUND FOR CLEANING GLOVES.—

	Parts
Eau de Javelle (solution of chlorate of soda) ..	135
Ammonia	8
Powdered soap	200
Water	150

Make a soft paste, and use with a flannel.

TO PRESERVE FLOWERS.—Dissolve by agitation and digestion in a closely stoppered bottle $\frac{3}{4}$ oz. clear, pale, gum copal, coarsely powdered and mixed with equal weight of broken glass, in 1 pint of pure sulphuric ether (ethylic ether). Dip the flowers in this liquid, remove quickly, expose to the air 10 minutes, then dip again, and expose as before. Repeat this dipping and drying four or five times. Most flowers thus treated will remain unaltered for some time if not handled.—*Scientific American*.

BAGGING FOR CHEMICALS.—A patent has been taken out by Grouchy for making bagging which resists chemical action. The bagging is plunged in the following solution at 60° C. (142° F.) and left for an hour:—

Sulphate of alumina	1 kilo.
Water	25 litres
Borate of lime	1 kilo.

The borate of lime is added after the sulphate of alumina has dissolved in the boiling water, and the whole decanted when settled. After taking out of this bath, the textiles are put in a second bath, composed of 1 kilo. of resinous soap and 1 kilo. of Marseilles soap, dissolved in 25 litres of water and carried to the boiling-point. At the end of ten minutes the cloths are allowed to drip, and dried, and then re-washed and dried. Bagging made in this way will, it is claimed, resist the action of any acids or chemicals put into them.—*New York Druggists' Circular*.

JABORANDI FOR STIMULATING THE GROWTH OF HAIR.—The *Union Pharmaceutique* last year published a note to the effect that a German physician had been struck with the curious production of hair in places where he had applied pilocarpine in hypodermic injection. A pharmacien having read that note, writes to say that he has found a mixture of tincture of cinchona and arsenic in which jaborandi leaves have been macerated produce excellent results.

ESS. BOUQUET SACHET POWDER.—

Powdered orris root	1 lb.
Musk	10 grains
Oil of rose	2 drachms
Oil of lemon	1 drachm
Oil of bergamot	4 drachms

Mix well by passing through a sieve.—*C. R. Avery*, in "New Remedies."

ARTIFICIAL FRIEDRICHSHALL WATER.—The following formula gives a very close approximation to the natural bitter water of that name. The genuine water is imported from Germany, but for some years there has been a considerable trade done in the manufactured article:—

	Ounces
Soda bicarb.	$\frac{1}{2}$
Soda sulph. (cryst.)	$1\frac{1}{2}$
Potas. sulph.	$\frac{3}{4}$
Mag. sulph. (cryst.)	20
Sodium chlor. (pure)	$10\frac{1}{2}$
Calcium chlor. (anhydrous)	1
Distilled water	q.s.

Mix the bicarb. and sulphate of soda with the sulphate of potash by rubbing them together in a mortar, add the sulphate of magnesia, and dissolve in three pints of water. Then add the other salts with sufficient water to form a solution. Pour the liquid into a fountain containing 12 gallons of water, and charge moderately with carbonic acid gas. It is then ready for bottling.—*New York Druggists' Circular*.

MELBOURNE INTERNATIONAL EXHIBITION.

THE Melbourne Exhibition will soon be a thing of the past. A few days ago the ceremony of distributing the awards took place, the various juries, numbering about forty, had completed their labours the day before. There was an immense attendance present to witness the ceremony, which was performed by His Excellency the Marquis of Normanby. The chairmen of juries, who handed in their reports, were presented to the Governor one by one. As soon as Her Majesty's representative had taken his seat on the dais, the Hon. W. J. Clarke, M.L.C., and President of the Commission, read a "progress report" to which His Excellency replied. Since the opening day the exhibition has been visited by large numbers from all parts of the Australasian colonies. More than a million have already passed through the gates. The net cost of this great show to the colony of Victoria will be about 250,000*l*. The formation of juries "was commenced in October, and the gratuitous services of over 350 gentlemen were secured for the purpose." The immense labour undertaken by some of the juries, and the patience with which examinations were conducted, and the amount of time bestowed are, says the report, "especially worthy of note, and demand the thanks of the Commissioners."

The result has been that 2,465 exhibits have been placed in the first order of merit, 2,013 in the second order, 1,651 in the third order, 812 in the fourth, and 581 honourable mentions.

The following tabulated statement is from the *Argus* :—

The comparative list of awards given below can only be regarded as approximate. It is made up from the jury-books to March 21. Its chief value will be to enable the reader to compare the number of honours awarded to each country. Several jury reports are still incomplete, and until all come in and the appeals are decided no list can be furnished that is even approximately correct. The list is as follows :—

	First Order of Merit	Second Order of Merit	Third Order of Merit	Fourth Order of Merit	Fifth Order of Merit	Hon. Men- tion
Austria	97	99	63	15	13*	—
Belgium	80	55	39	23	17*	—
British India	98	95	63	20	16	22
Ceylon	25	13	17	13	3	6
France	338	189	135	85	47	6
Fiji	6	16	12	7	5	1
Germany	259	269	179	62	16	2
Italy	138	159	128	103	38	2
Japan	12	17	37	15	5	1
Mauritius	20	19	6	—	3	1
Netherlands	55	38	14	12	6	—
New Caledonia† ..	—	—	—	—	—	—
New South Wales..	51	51	42	14	12	6
New Zealand	69	75	57	28	17	5
Queensland	31	24	24	18	16	9
South Australia ..	35	41	20	21	3	8
Switzerland	12	8	5	2	2	1
Straits Settlements	23	33	16	8	8	2
Tasmania	40	11	7	6	8	4
United Kingdom ..	559	290	180	78	27	5
United States	115	66	25	13	10	1
Victoria	373	362	213	123	60	29
Western Australia ..	3	3	8	2	2	2

* These numbers include some hon. mentions.

† Awards not computed.

The Governor in his reply, after distributing the awards, made the following observations, amongst others :—"Its success—the Melbourne International Exhibition—has far exceeded my most sanguine expectations. The display of manufactures and products in the Victorian Court is such as the colony may well be proud of, and the Exhibition of Melbourne will long remain an example of what may be accomplished by a young, an energetic, and an ambitious country." Whether the permanent benefits resulting from this somewhat extravagant enterprise will compensate for the enormous cost to this colony is a matter of doubt. We shall have the huge and unlovely building to look at and a quarter of a million of money to pay! The real success of our big

show is due to the exhibitors, especially the English, French, and German.

The awards in the Pharmaceutical and Chemical classes will be found below, as well as perfumery and some others of a mixed character, but which were placed under the same jury. The Pharmaceutical jury—the composition of which I forwarded to you in my last communication—worked well and with an earnest and conscientious desire to do justice rigidly. Fortunately the chairman had as his clerk a gentleman of ability as a scientific chemist, who undertook a great many examinations for the purpose of testing the quality and comparative purity of the exhibits which were committed to him.

The other members of the jury also did a large amount of work, so that every possible care was taken to obtain fixed data upon which to base the awards. It has been decided by the Executive Commissioners to give medals only to those in the first order of merit, which will consist of gold, silver, and bronze. The medal will have the Queen's head on one side, with the words "Melbourne International Exhibition," and on the obverse a wreath with the words "Vitam excoluere per artes." The medals have been struck at the Melbourne Royal Mint. The chairman of the Chemical and Pharmaceutical jury, Mr. C. R. Blackett, who is President of the Pharmaceutical Society and one of the Royal Commissioners for the Exhibition, received the thanks of the jury for his services, and the same compliment was paid to Mr. G. Manly Hopwood, F.I.C., who acted as jury clerk and expert. It is satisfactory to find that the awards made by this jury have been generally approved of, very few appeals having been sent in, and on reference to experts the original decisions were in most cases sustained. The amount of work involved in examining and estimating so great a collection of exhibits must have been very great, and if some errors have been made it is not to be wondered at. In examining the list of awards you will find that very unimportant art exhibits are placed in the first order of merit. That, of course, does not imply that the jury considered them as of equal value and deserving of as much commendation as grand exhibits, but that of a class or of a lot of similar articles such and such was the best relatively. It would be absurd, for instance, to consider a bottle of marking ink as of the same rank as a show of alkaloids such as Thos. Whiffen's, T. & H. Smith's, or Merck's, and others equally beautiful. We have been told by the superintendent of juries, Mr. Cosmo Newbery, B.Sc., that this is clearly understood by the Commissioners. In passing I cannot omit to mention that Mr. Newbery has proved himself one of the most efficient and courteous officers of the exhibition. He is a man in whom everyone has the most perfect confidence, and the Commissioners could not have made a better selection. The whole administration of the 40 juries has rested on his shoulders, and exhibitors and jurors have reason to thank him.

The list of awards is a long one. The Executive have decided to adhere to their original intention with regard to the issue of medals, very many of those who obtained for some trifling exhibit a "first order of merit" award will not get anything more than a certificate. Gold and silver medals will only be given to important and valuable exhibits.

The Emperor of Germany has offered a magnificent prize, which has been valued at 700*l*. This prize is to be awarded to one of the Australian exhibitors on the recommendation of the chairmen of the juries. It will be an exceedingly difficult matter for the decision of these gentlemen, although the number of eligible candidates must be small, yet the competition will be keen, and the disappointment great to those who must—as they may think they have equal merits—be overlooked. It is to be hoped that the result of the adjudication will be such as to give universal satisfaction!

The following lists of awards are complete for the sections named. We gave last month a more general list of British awards, including those of other sections.

CHEMICAL AND PHARMACEUTICAL PREPARATIONS.

JURY.—C. R. Blackett (chairman), M. Galloy, H. Brind, P. R. Challen, Sydney Gibbons, W. Johnson, J. Kruse, J. Robertson, S. H. Roberts, J. G. A. Stitt, R. G. Wilson, Dr. Renzio, and Baron von Mueller; expert, Geo. Manley Hopwood.

First Order of Merit.—Badische Anilin and Soda Fabrik, Germany, artificial indigo, other colours, &c.; Blaquaert & Genevoix, France, reduced

iron for medicinal use; J. Besisto, Victoria, eucalyptus preparations; F. C. Calvert & Co., Great Britain, carbolic acid preparations; Chininfabrik Braunschweig, Germany, quinine, &c.; Corby, Stacey & Co., Great Britain, rare chemical and pharmaceutical preparations; Cumming, Smith & Co., Victoria, mineral acids, &c.; Desnoix & Co., France, plasters and surgical dressings, &c.; C. Eoba, Italy, pharmaceutical preparations; Felton, Grimwade & Co., Victoria, mineral acids, chemical and pharmaceutical preparations; E. Genevoix & Co., France, pharmaceutical preparations; Golding, Davis & Co., Great Britain, chemical products; Herrings & Co., Great Britain, pharmaceutical preparations; Dr. P. von Heydeu, Germany, salicylic acid, &c.; Limousin & Co., France, medicated wafers; Maltine Manufacturing Co., Great Britain, pharmaceutical preparations with maltine; E. Merck, Germany, chemical and pharmaceutical preparations; J. Mounet & Co., Switzerland, aniline dyes; Philadelphia College of Pharmacy, United States, collection of medicinal herbs, roots, and barks; A. Poirvier, France, aniline dyes; A. Ponsetti, Italy, medicated lozenges; Poulenc & Son, France, pharmaceutical and chemical products; J. Richardson & Co., Great Britain, pharmaceutical preparations; Rigollet & Co., Great Britain, mustard leaves; Seabury & Johnson, United States, medicinal, surgical, &c., plasters; E. Schering, Germany, chemical, &c., preparations; Dr. T. Schuchardt, Germany, chemical, &c., preparations; W. H. Schieffelin & Co., United States, pharmaceutical preparations; T. & H. Smith, Great Britain, opium, derivatives, &c.; Solvay & Co., France, carb. soda, &c.; Solvay & Co., Belgium, carb. soda, &c.; Southall Brothers & Barclay, Great Britain, pharmaceutical preparations, &c.; K. T. Staiger, Queensland, collection of indigenous medicinal barks and preparations; Stassfurt Associated Mines, Germany, representative collection illustrative of the Stassfurt mines industry; C. Torchon, France, chemical and pharmaceutical preparations; G. G. Verzyt & Co., Belgium, chemical products; W. R. Warner & Co., United States, pharmaceutical preparations; F. Wilhelm & Co., Austria, medicinal herbs, &c., and chemical and pharmaceutical preparations; T. Whiffen, Great Britain, quinine preparations and strychnine.

Second Order of Merit.—Armet de Lisle & Co., France, quinine, &c.; Bruckner, Lampe & Co., Germany, drugs and essential oils; Burgoyne, Burbridge, Cyriax & Farries, Great Britain, essential oils, chemical and pharmaceutical preparations; L. d'Emilio, Italy, pharmaceutical preparations; A. Hottot & Co., France, pepsine and preparations; P. Leonardi, Italy, medicinal gelatine; Montreuil Freres and A. Vignet & Co., France, chemicals and drugs; Rae Kanny Lall Dey Bahadour, Bengal, collection of Indian drugs; J. Schlesinger & Sons, Austria, potash, raw and refined; D. Ulrich, Italy, medicinal herbs and essences.

Third Order of Merit.—Crowther and Mitchell, West Australia, salt; P. S. Grassi, Italy, quinine and comps, &c.; L. M. Gazzardi, Italy, chemical and pharmaceutical preparations; W. R. Guilfoyle, Victoria, vegetable extracts and castor oil; Native Penal department, West Australia, salt.

Fourth Order of Merit.—C. A. Atkin, Victoria, quinine wine; H. Ockell, Wilson & Co., Great Britain, effervescent preparations.

Fifth Order of Merit.—G. Kingsland, Victoria, pharmaceutical preparations.

Honourable Mention.—Rocke, Tompsitt & Co., Victoria, pharmaceutical preparations; D. Samuelly, Austria, prussiate of potash.

MEDICINAL OILS.

First Order of Merit.—Khettermohun, Bysack & Sons, Bengal, castor oil; W. Nitschke, South Australia, eucalyptus oils.

Second Order of Merit.—Guilfrido & Leotta, Italy, castor oil; H. L. Muhle & Co., Germany, cod-liver oil; Rae Kanny Lall Dey, Bahadour, Bengal, medicinal oils.

Third Order of Merit.—Berkley, Taylor & Co., Queensland, dugong oil; D. A. T. Dessanaitka, Ceylon, medicinal oils; Stiller & Co., Queensland, dugong oil.

MEDICINAL BARKS, &c.

First Order of Merit.—Botanic Gardens, Calcutta, collection of cinchona barks; Government of Madras, Madras, cinchona bark, jalap, &c.

Second Order of Merit.—E. H. Cameron, Ceylon, cinchona barks; Lee, Hedges & Co., Ceylon, cinchona bark; Mackwood & Co., Ceylon, cinchona bark; T. C. Owen, Ceylon, cinchona barks.

Third Order of Merit.—Botanic Gardens, Brisbane, collection of medicinal and other barks.

PERFUMERY.

PERFUMES, SOAPS, &c.

First Order of Merit.—J. & E. Atkinson, London; Apollo Stearine Candle Company, Melbourne; Gustav Beehm, Offenbach, Germany; T. C. Boldoot, Amsterdam; Calderara & Bankmann, Vienna; E. Coudray & Sons, Paris; D. Angelis & Co., Messina; De Pasquale Bros., Messina; A. C. Diedek's & Son, Vienna; F. M. Farina, No. 4,717, Cologne; J. Fisher, Singapore; Gantier & Co., Paris; Gierlain, Paris; J. Gosnell & Co., London; C. Hardouin, Penang; J. Kitchen & Sons, Melbourne; L. Lechner, Berlin; G. Luciano, Turin; A. Mueller & Co., Messina; Maison Neuve, Delft; G. Oates & Co., Messina; Piesse & Lmbin, London; E. Rimmell, London; Ronre-Bertrand Fils, Grasse, France; Sanders & Co., Leyden; Gottlieb Taussig, Vienna; Young, Ladd & Coffin, New York.

Second Order of Merit.—Carcano, Paris; Crown Perfumery Company, London; A. Delettrez, Paris; Delmege, Reide & Co., Ceylon; T. Demartini, Prague; Eastman & Brother, Philadelphia; Jünger & Gebhardt, Berlin; Maubert Soap Company (Limited), Brussels; Roger & Gallett, Paris; W. Rieger, Frankfort-on-Maine; Treu, Nüglisch & Co., Vienna; Tilley & Clack, Melbourne.

Third Order of Merit.—J. T. Burnett & Co., Boston; W. J. Bush & Co., London; Cottance, Paris; C. Dubois, Mous; S. Frecceri, Genoa; Hemmons, Laws & Co., Melbourne; Muraour and Cie., Paris; A. Rix, Vienna.

SPECIAL DIVISION.—EAU DE COLOGNE.

First Order of Merit.—J. & E. Atkinson, London; E. Coudray & Sons, Paris; Delettrez, Paris; C. Fievet (Johann M. Farina, gegenüber dem Altenmarkt), Cologne; J. Gosnell & Co., London.

Second Order of Merit.—C. A. Atkin, Melbourne; J. Burnett & Co., Boston; E. Cuntze, Cologne; Johann M. Farina, Cologne, Julichs Platz, No. 4; Johann M. Farina, Cologne, gegenüber dem Neumarkt; F. M. Farina (No. 4,717) Cologne; Gantier & Co., Paris; F. Longmore, Melbourne; Marie Clementine Martin, Cologne; E. Bimmel, London; Roger & Gallett (Jean Marie Farina) Paris; Young, Ladd & Coffin, New York.

FILTERS.—FROM CLASS 10.

First Order of Merit.—R. T. Adams, Victoria, Dabke's improved patent silicated carbon filter; G. Cheavin, England, rapid water filters; A. G. Middleton, Victoria, dripstone filter; Timperley Brothers, Victoria, improved water-filters.

Second Order of Merit.—J. G. Holt, Victoria, pure carbon filter; A. G. Middleton, Victoria, carbon and dripstone compo. filter; Silicated Carbon Filter Company, England, silicated carbon filters.

MISCELLANEOUS.

First Order of Merit.—W. & T. Avery, England, assay and chemical balances; Doulton & Watts, England, stoneware chemical apparatus; M. Flurschheim, Germany, pharmacutists' mills and presses; T. Fevre, France, seltzogenes; H. Maldine, France, seltzogenes; E. L. Robert, France, feeding-bottles; A. Ziemann, Germany, vacuum apparatus.

PROTOCHLORIDE OF IRON AND ITS PREPARATIONS.

By WM. GILMOUR, Edinburgh.

RECENT experiments by some of our professors have gone far, we understand, to prove the superiority, in several respects, of ferrous chloride as a therapeutic agent over many of the other salts of iron at present in use.

Such being the case, it is more than probable that we may have shortly to face, not a new series of pharmaceutical preparations exactly, but some comparatively unknown to many, and therefore, taking time by the forelock, a few suggestions, we think, may prove generally acceptable. Most of the facts and points referred to in the following paper were brought out in a series of experiments for the information of a medical friend, and not with any ultimate view to publication, but they are none the less practical and to be depended upon on this account.

Preparation of Ferrous Chloride.—Ferrous chloride, or protochloride of iron, as most text-books inform us, may be prepared in three ways: by (1) passing chlorine or hydrochloric acid gas over iron filings or turnings heated to redness in an iron tube connected with a receiver into which the product may sublime; (2) by heating iron filings or turnings with sal ammoniac; or (3) by dissolving the iron filings in dilute hydrochloric acid, filtering the solution and heating until crystallisation takes place. By any of these methods the product represented by the formula $\text{FeCl}_2 \cdot 4\text{H}_2\text{O}$ may be obtained, and it requires only a moment's consideration to show that the last, so far as the pharmacist is concerned, is the most practical process, and, moreover, one from which almost any pharmaceutical preparation or combination of this salt likely to be required may conveniently be obtained. Unfortunately, none of the text-books give the relative proportions of the ingredients by this process, nor do they enter into any details whatever, so that many important points are left to be found out by experience or experiment. The proportions are not difficult of calculation: thus, taking one equivalent in grains of iron (56 grains), two equivalents of hydrochloric acid gas (or 230 grains of the Pharmacopœia acid) are required; and, if we keep in mind that this yields 127 grains anhydrous protochloride, or 199 grains $\text{FeCl}_2 \cdot 4\text{H}_2\text{O}$, we have a basis from which we may calculate the proportions for any preparation or any quantity.

It is at this point, however, that difficulties will probably be experienced, for the process, which, at the best, is somewhat tedious, may be retarded, or even arrested altogether, if the acid be employed either too dilute or too strong. If it be too strong the action, though brisk at first, will quickly lessen, and soon altogether cease, so that anyone not familiar with the process might imagine that at this point it was finished. If heat, however, be now applied it will be found that the action will once more begin, and go on briskly for a time, but by-and-by it again ceases, on which, if further heat be continued to be applied, the whole will quickly pass into a semi-solid condition. The explanation is simply this, that the strong acid soon becomes saturated with the chloride of iron, which, crystallising round the undissolved iron, stops the further action of the free acid on it. On the application of heat the chloride dissolves, and once more permits the action to proceed, but it again soon becomes saturated, this time super-saturated, so that on the least diminution of the heat, or on its continued application causing aqueous loss through evaporation, the whole passes, as has just been stated, into the semi-solid state. On the other hand, if the acid be too dilute the action will go on for hours, and in the end so slowly that it is difficult to tell the exact time when it is completed. There is also the further fact to be kept in mind, namely, that in making pills or syrups (the only two preparations on which we have experimented) it is necessary to proceed with the smallest quantity of water possible, so as to run no unnecessary risk from oxidation by after evaporation and concentration. After many experiments, the proportions which we would recommend, subject to conditions afterwards to be referred to, would be, for every part of hydrochloric acid two parts of water. There is only one other point which need be here referred to, namely, that the iron ought always to be taken slightly in excess of its theoretical proportion, owing to the fact of its never being found in a state of absolute purity.

Formulae.—It has already been stated that we have only experimented with the syrup and pills, but speaking from experience no other preparations will probably ever become popular. At least the sugar, which of necessity enters into the one and which may be made to enter into the other also, is useful in these, as in all ferrous preparations, in preventing oxidation, and the forms in other respects as well as those most suitable for its administration.

Syrup of Protochloride of Iron.

Take	Iron wire (cleaned and cut small)	70 grains
	Hydrochloric acid, B.P.	288 grains
	Water	1½ oz.

Put the ingredients into a small flask and heat gently until effervescence ceases; then boil for a few minutes, and filter while hot into thick simple syrup. The whole, when finished, should measure 10 fl. oz., and each fl. drachm will contain as near as possible 2 grains anhydrous ferrous chloride. The water here employed to dilute the hydrochloric acid is in excess of that already suggested or in that used in the succeeding formula for the pills, but this is rendered necessary by the application of heat and the smallness of the quantities operated upon. It is evident, however, that, whatever the amount of water originally taken, the ultimate result may be regulated by the density of the syrup into which the product is filtered.

Pills of Protochloride of Iron.

Take	Iron wire (cleaned and cut small)	130 grains
	Hydrochloric acid, B.P.	516 grs. (nearly 1 fl. oz.)
	Water	2 oz.

Put into a small flask and proceed as in the previous case; filter while hot into an evaporating-dish, and quickly evaporate until, on stirring with a glass rod, the whole crystallises, when it should be added to the following mixture:—

	Sugar, finely powdered	200
	Liquorice powder	200
	Tragacanth powder	20

Mix into a mass, and divide into 144 pills. Each pill will as near as possible, contain 2 grains anhydrous chloride.

If the crystallised chloride be added too quickly to the powders the mass may probably be too soft in the first

instance, in which case it may be transferred to an evaporating-dish, and dried carefully with a gentle heat. This must, however, be done with great care to prevent oxidation from exposure on the one hand, or charring and consequent oxidation from over-heating on the other.

Keeping Properties, &c.—So far as the keeping properties of these preparations are concerned they promise to possess advantages over many of the ferrous preparations now in use. Several quantities of syrup, both 2 grains and 4 grains protochloride to each drachm, were exposed under various conditions, such as to bright sunshine, to diffused light, in the dark, and in bottles loosely corked, and in none of the samples, after several weeks' exposure, was there any appreciable change. The samples loosely corked, and another sample put into a bottle and half filled, and which was from time to time frequently opened, so as to represent as much as possible the conditions of a dispensing bottle, had passed into a deep straw colour, but in none of the other samples was there any appearance of passing into this stage, and in none was there any deposit sufficiently large to be estimated. An estimation of the iron present in the ferrous state in all these samples was afterwards made, and in every respect confirmed these preliminary observations. The same remarks apply to the pills so far as risk from oxidation is concerned, but with them there is a difficulty which, as it is not so frequently met with, it may be as well to refer to at length. The pills, when made according to the formula given, do not contain the protochloride in the anhydrous state, but something between that state and one containing the full quantity of water of crystallisation represented by the formula $4H_2O$. If the full percentage of water of crystallisation were allowed for, the amount in the foregoing proportions would be 162 grains, and this, following out the directions given, would be found in the first instance to make the mass too soft. On the other hand, if the water representing the water of crystallisation be reduced by evaporation to 140 grains, or thereby, and the protochloride in this state added to the powders while still in a boiling condition, so as to retain as much free moisture as possible to act on the sugar, a mass will be obtained which, on cooling, will roll off easily, and when cold will be hard and firm. The difficulty is to keep them in this state. After keeping them in the ordinary way for ten days or a fortnight, the pills will gradually begin to soften from absorption of moisture, and this will go on until they are so soft as scarcely to be fingered. In this state they do not run or flatten as some pills do, nor do they suffer oxidation to any appreciable extent. Nearly a dozen experiments were made on different samples that had been exposed to atmospheric influence for nearly a month, and embracing samples so moist as to go into a soft paste on the least touch, and in none was there any oxidation greater than might be accounted for by error in experiment. This is very different from our experience of other ferrous preparations, and particularly of Bland's pills, which have of late again become somewhat popular. We may take an early opportunity of referring to these for the purpose of pointing out the amount of oxidation that takes place in the preparing and keeping of them, but in the meantime we would simply refer to the experiments which were tried to overcome the hygroscopic tendency of the protochloride when thus formed into pills. Coating them in the usual way with gum water and chalk was the first process tried, but this was not found sufficient to protect them. Silvering kept them good for nearly a fortnight, but after that the leaf began to tarnish, and they got repulsive-looking and quickly gave way. Coating them with a thin coating of oil of theobroma, and afterwards rolling them in powder was found in every way to answer better. This kept them, if carefully stored, for a considerable time, but if kept in an ordinary pill-box they began to crack between the third and fourth week, but only after this did the process of softening proceed, which it did slowly. To obviate as far as possible this cracking tendency, which renders the pills somewhat inelegant, the tragacanth powder was added to the mass to render it more cohesive, but this only partly overcame the difficulty. Since trying the foregoing experiments it has been suggested to coat them with balsam of tolu. Sufficient time has not elapsed to try this properly, but probably it will be found to answer the purpose, particularly if they are kept in air-tight vessels.

OLIVE OILS IN FRANCE.

THE Bordeaux Chamber of Commerce has received from the Customs authorities in France a communication with reference to olive oil. It is pointed out in this communication that the laws of 1846 which authorised the free admission of olive oil, &c., intended for refiners in France for re-exportation, did not define what was meant by the word "refining," and what processes the products must undergo. Thus, for a long time, some manufacturers restricted themselves to a simple process of racking. The Consultation Committee of Arts and Manufactures has declared a simple deposit of oil in vessels for the purpose of "settling" and afterwards being racked was only a clarification, and not refining in the sense of the law, and that the free admission privilege was only applicable to oils treated by sulphuric acid or other equivalent chemical agent. The two Departments of Commerce and Finance have adopted these conclusions, but not apparently as regards olive oils; and the Customs authorities having recently wished to extend the system so as to embrace olive oil, vigorous protests have been made by the trade against such a proceeding. It is pointed out on behalf of the trade that the refining of olive oil by sulphuric acid would alter the quality of the oil, and would render it even insalubrious. At Bordeaux these products have always been refined by heating them in wooden receptacles bound with tin plate, and then filtering them through a compact bed of cotton. Having regard to these facts the Customs authorities in France have decided to permit the free admission of olive oils refined by the process adopted at Bordeaux.

THE CHEMICAL SOCIETY.

Thursday, June 2.

PROFESSOR ROSCOE, President, in the chair.

It was announced that a ballot for the election of Fellows would take place at the next meeting of the Society (June 16).

The following papers were read:—

"Experimental Researches on the Amalgamation of Silver Ores," by C. Rammelsberg.

"On the Action of Solvents on Saponified Oils and Waxes," by A. H. Allen and W. Thomson. The authors have made many experiments with a view of discovering a correct method for the analysis of mixtures of hydrocarbons with animal and vegetable fatty matters. Two methods are suggested. In both the sample is boiled with a solution of caustic soda in alcohol, which is in one case diluted with water and then shaken up with ether, to dissolve out the unsaponifiable matter, leaving the soap in the solution; in the other method the alcohol is added to the mixture, and then some sodium bicarbonate and ignited sand; the whole is dried and extracted by petroleum spirit in a Soxhlet apparatus. Some analyses are given in the paper. Good results were obtained.

"On the Sulphides of Copper and a Determination of their Molecular Weight," by S. U. Pickering. The author has heated cupric sulphide alone, in a current of hydrogen, and in a current of carbonic acid, and concludes that the sulphur is given off in two separate and equal portions at totally different temperatures; therefore the molecule contains two atoms of sulphur. Hydrogen reduced the sulphide to the metallic state.

"Chemical Examination of the Buxton Thermal Water," by J. C. Thresh. The author has disproved the extraordinary statements of Playfair and Muspratt that one gallon of this water contains 206 and 504 cubic inches of nitrogen. The water really contains 22.98 c.c. of nitrogen per litre. He points out how the error originated. A complete analysis of the mineral constituents is given; amongst them are molybdic acid, cobalt oxide, &c.

"On Potable Waters, Determination of Total Solids," by E. J. Mills. This determination is made by carefully noting the time required by a glass bulb to rise a given distance through the water.

"On the Estimation of the Value of Zinc Powder, and on a Gauge for Measuring the Volume of Gases without Calculation for Temperature and Pressure," by J. Barnes.

Thursday, May 19.

Professor ROSCOE, President, in the chair. The following papers were read:—

"On Ammonium Nitrite and the Reaction between Hydrogen and Nitric Oxide in the presence of Spongy Platinum," by L. T. Wright. The author has repeated the experiments recently made by G. S. Johnson, who stated that the synthesis of ammonia was effected by passing hydrogen and nitrogen over heated spongy platinum. The author states that the nitrogen was contaminated with nitric oxide. The substance used by Johnson, ferrous sulphate solution, for freeing the nitrogen from nitric oxide, does not completely absorb that gas. When pure nitrogen, obtained by the action of potassium hypobromite on ammonium chloride, or by passing the nitrogen evolved by heating ammonium nitrite through an alkaline sulphite, was used no ammonia was formed. Hydrogen reacts upon nitric oxide in the presence of cold spongy platinum to form ammonium.

"On the Synthetical Production of Urea from Benzol, Ammonia, and Air by the action of heated platinum," by E. F. Herroun. The author has aspirated air through benzol and ammonia, and then passed the mixed vapours over a heated spiral of platinum wire. Urea was formed which was identified by its reactions and analysis. Acetylene can be substituted for benzol vapour.

"On a Proposed Volumetric Method for the ready Estimation of a Soluble Sulphate and free Sulphurous Acid or of free Sulphurous and Sulphuric Acids even in the presence of Sulphates," by O. V. Pisani.

"On the Identification of Crystallised Alkaloids by the Microscope and the Use of Polarised Light," by A. Percy Smith.

"On the Colour Properties and Colour Relations of the Metals of the Iron-copper Group," by T. Bayley. The author continues in this paper his investigations as to the quantities of cobalt and nickel or of cobalt, copper, and iron, which, when mixed as sulphates, produce colourless grey solutions.

"On the Effects of the Growth of Plants on the amount of Matter removed from the Soil by Rain," by E. W. Prevost.

"On the Action of Sodium on Cinnamic Ether," by F. Hutton.

THE PRODUCTION OF SALTPETRE IN INDIA.

IN a report on the trade of Calcutta for the past year reference is made to the above subject. Saltpetre has always formed an important article of export from the port of Calcutta; but in consequence of laws recently enacted by the Indian Government, it seems probable that the cost of the article at Calcutta will be so much enhanced as to interfere with its purchase for foreign markets, especially for the American market, where it will be unable to compete with nitrate of soda produced in that country. It is stated that the price of crude saltpetre is advancing every day as smaller supplies come in from the producing districts. Before the new laws were passed saltpetre was largely collected from producers, each of whom made a very small quantity, and when collected in sufficient bulk was sent forward for a market. The production of saltpetre is roughly described as follows:—The earth dug from the natural nitre-beds is placed in straining-cloths over a metal vessel and water poured on it; lixiviation follows, and the resultant water in the vessel is then boiled. In this process a saltpetre deposit is formed on the sides of the vessel; this is known as "kutchra" saltpetre, from which, by successive boilings, the crude and refined saltpetre is made. The water in the vessel is then turned off; this water still contains some saltpetre and ordinary salt, and is saved and used over the lixiviation of fresh soil. The new laws, besides placing a heavy tax on the production of saltpetre itself, compel the producer to take the water after the first boiling process described above, extract all the salt from it, and pay a tax on the amount thus extracted. The opinion is expressed that this law will virtually prohibit the manufacture of saltpetre save on a very large scale, and will entirely preclude its production by the poorer people in a small way. Heretofore, it may be remembered, these people have been, in the aggregate, the largest producers.

Personalities.

MR. T. C. TAYLOR, from Aylesbury, has taken the business of the late Mr. John Raynor, of Long Row, Nottingham.

MONSIEUR JOAQUIN MARTI Y ARTIS, of Smyrna, whose letters on the opium market in this journal last autumn attracted much attention, has disposed of his mercantile business to Messrs. Barry & Co., of that city.

MR. STEVENSON has joined the firm of Messrs. Fletcher & Fletcher, manufacturing chemists, Holloway, as partner, and the style will be in future "Fletcher, Fletcher & Stevenson."

THE Lord Chancellor has placed the name of Mr. Arkas Sapp, chemist and druggist, and a member of the Pharmaceutical Society, upon the Commission of the Peace for the Borough of Basingstoke.

THE old-established business of Mr. C. H. Fryer, 18 High Street, Kidderminster, has been purchased by Mr. Gascoigne. The valuation was conducted on behalf of the buyer by Messrs. Berdoe, and of the vendor by Mr. Brett, of Leicester.

MR. THIRLEY, Highcross Street, Leicester, has purchased the extensive mineral-water plant of Messrs. Butler & Beckett, of the same town, and is carrying this on in addition to his chemist's business. The valuation was conducted on behalf of the purchaser by Mr. Brett, of Leicester.

MITCHELL v. CONDY.—A long-pending dispute between these whilom partners, affecting the settlement of their accounts, was decided by the Court of Appeal on May 18. Mr. Condy appealed from the decision of Vice-Chancellor Bacon, claiming that on an alleged ambiguity in the deed of partnership he was entitled to estimate his capital at more than the sum set down in the deed of partnership. The Court, however (the Master of the Rolls and Lords Justices James and Lush), ruled, after hearing Mr. Condy's counsel only, that the terms of the deed were not ambiguous, and could not be challenged now, especially as no objection was made thereto when the decree for the partnership accounts to be taken was ordered in 1877.

PROFESSOR GAMGEE.—A good many people in the London trade will remember the handsome, sanguine, and fertile-brained Professor John Gamgee. The Professor first came to the front in the veterinary line, and accomplished certain achievements in regard to the cattle plague, and, we believe, founded a new college, which completed its career of usefulness some years ago, leaving but little trace of its usefulness behind except the title with which its principal was decorated for life. This means of activity having dried up, the Professor next engaged in experiments which resulted in the discovery of the wonderful antiseptic virtues of chloride of aluminium, and on which he based his commercial exploits with chloralum. That product went through a good many ups and downs, but for a time at least a great trade was made in it, and the Professor, we understand, sold out to a military capitalist when the tide was high, and set his genius to work in another direction. Financial agency occupied him for a time, with what success we do not know, but just as we had forgotten him once more his name reappeared as the inventor of a new process for making ice, and the Glaciarum on the Thames soon arose as a practical illustration of his process. We met the Professor about this time, and congratulated him. He was calmly confident and triumphant. The day of small things had passed away, and marvellous was to be the progress of the new system. But the Glaciarum melted, and the Professor dived again. We thought of him the other day as we watched the seals at the Brighton Aquarium, and we were wondering at what part of the surface he would next show. Recent American papers answer the problem. "Professor John Gamgee, of London, now residing at Washington," appears as the inventor of a "thermo-dynamic engine," otherwise called a zeromotor, which will economise most of the 90 per cent. of the dynamical loss incidental to the use of steam. The invention, says the Washington correspondent of the New York *Evening Post*, "if it succeeds will be of far greater consequence than any other invention of modern times." It is proposed to use

ammonia, and at ordinary temperature convert it into vapour. The expansion is to work the piston, and the working of the piston is to convert the vapour back into liquid form again. The liquid is to find its way round again, and so a perpetual cycle is to be maintained. We always felt confident that when perpetual motion was discovered Professor John Gamgee would be the hero thereof.

MR. HENRY LAMPLOUGH.—A new magazine, entitled "Celebrities of the Day," has made its appearance, and has already lived two, if not three, months. It contains a number of short biographical sketches of living men. The sketches are complimentary rather than critical, and the grouping is picturesque in its variety, Whig and Tory, parson and actor, peer and shopkeeper rubbing shoulders in its pages. Part 2 contains, with a dozen others, a sketch of the career of Mr. Lamplough, whose name at least is well known to every reader of this journal. The following are the facts given; our verbal extracts from the magazine will be indicated by quotation marks:—Mr. Lamplough was born in 1813 at Bridlington Quay, where his father was a merchant and captain. Intended at first for the nautical profession, "young Lamplough's mind soared to something higher, and to what was destined to so materially benefit his fellow-men, namely, the study of chemistry in all its branches." That is, as far as we can make out, he was apprenticed to a chemist and druggist, a Mr. S. H. Turner, at Scarborough, and no doubt dusting bottles and taking down shutters was one of the many branches of chemistry which he set himself to study. But he does not seem to have taken to the drug trade out of any fear of old Neptune, for it is recorded of him that, during his apprenticeship, he, with three men, went through a violent sea to a ship in distress in an open boat, and saved the whole crew. He also once bravely plunged into the sea from the pier and rescued two women who were drowning, for which deed he was rewarded by suitable local address and presentation. Coming to London, Mr. Lamplough made the acquaintance of Dr. W. Stevens, who was writing on fever, cholera, and the blood. Somehow, in association or separately, we do not know which, they produced the pyretic saline. Mr. Lamplough, early in his career, circulated thousands of pamphlets, the main purpose of which was to urge the observation of the fact that small-pox treated in the absence of light left no marks; "advising the public to remark one suggestive fact—the great difference of the parts, covered and uncovered, during the progress of this rightly-dreaded disease." It is also claimed for him that by means of pamphlets and letters to Sir Charles Wood and to Mr. Gladstone, Mr. Lamplough materially assisted in the development of the Government savings bank system. "As may be supposed, such a man as Mr. Lamplough has many times been requested to sit in Parliament, but he has found his more legitimate pursuits take all his attention. Mr. Lamplough has recently met with a severe domestic bereavement. The partner of his life for nearly fifty years has been taken to her rest. An acute sufferer, in one sense it may have been a release, but to him who is left behind a loss of this character is irreparable, and his palatial home at picturesque Deal is rendered desolate. His chief consolation is in active philanthropy—medical, moral, eleemosynary; and when, *secundum naturam*, his own summons shall arrive, no one will have better earned the promised 'Well done' of the Bridegroom."

WAS not the editor of the *Sheffield Daily Telegraph* once in the drug trade? If so, he had better himself revise the answers to correspondents on matters affecting that interest. In his journal of May 24 the following question and answer appear:—

"Tero."—Is it legal for a non-qualified person to make and sell ointment, pills, and other medicines labelled and setting forth their beneficial effects, with a caution that the medicine is not sold as a cure, but only as a help or assistance to recovery from such and such diseases?—No.

Report says that there are sundry and divers persons within a small radius of the *Sheffield Telegraph* office infringing the law thus laid down by the oracle, but no one knows under what Act to proceed against the offenders.



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 See page 104.

MEDICATED THROAT PASTILLES As suggested by Dr.
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 DIARY, pages 60, 116, 172, 179, 183, 194, 197, 198,
 and 213.

ELLIMAN'S EMBROCATION. See page 98.

MAY & BAKER. { SPECIAL NOTICE,
 page 2.

EDITORIAL

NOTES.

A COMPULSORY CURRICULUM.

THE proposal of a compulsory curriculum for pharmaceutical
 students is a long time getting to the front. That a regula-
 tion insisting upon it is desirable is the conclusion of the
 Committee of the Pharmaceutical Council appointed to con-
 sider the question, and their opinion, no doubt, deserves the
 highest respect, for it is that of competent and practical
 men, who have systematically looked all round the subject.
 But so long as they prefer to keep back the arguments
 which have convinced them, they must be prepared to
 recognise the gradual formation of opinion out of the
 materials available to the non-official inquirer. They re-

commend that a candidate for the Minor, that is, the qualifying examination, should be required to prove that since passing the Preliminary examination he had been engaged for three years as apprentice or assistant to a registered chemist and druggist, and had also attended at least one course of lectures on chemistry, one course on botany, one on materia medica, and a laboratory course. That any such regulation would be sanctioned by the Privy Council is more than doubtful, in the face of the cogent remarks on this very point which Dr. Greenhow interpolated in his last annual report on Pharmaceutical Examinations which we printed in our April number (page 139). He considered a curriculum "not required for persons preparing for the Minor qualification. The examination, when properly conducted, affords a sufficient guarantee of a candidate's fitness for registration under the Pharmacy Act, and the examination is not at present so high that a fairly educated young man cannot very well prepare himself for it during the period of his apprenticeship." He does not see any immediate necessity, in the interest of the public, to raise the standard and thus render a curriculum really necessary. The majority of the candidates, however, he points out, do already attend some school before presenting themselves as candidates, and he concludes that the question of a curriculum is one that may very well be left to the discretion of the candidates themselves.

Dr. Greenhow is the officially-appointed Government visitor at the pharmaceutical examinations, and he has attended them and watched them very closely now for some dozen years. His conservative opinions on this subject are, therefore, based on exceptional experience, and are enforced with such simple logic that they cannot fail to convince most people who consider the subject; at least, until the views of experts on the opposite side are made prominent.

As we intimated, this opinion of Dr. Greenhow's will be sure to considerably influence the Privy Council, and renders the prospect of a compulsory curriculum, however desirable it might be, very shadowy. It is by no means in the trade interest to take Dr. Greenhow's view of the matter. The more stringent the conditions of entrance to the trade, and the superiority of those who do enter it, are to the manifest advantage of those already in. But with all goodwill that way it is difficult to get up much sympathy with the advocates of the change. No one will doubt the possibility of an intelligent young man preparing himself for the examination, if he will, without the aid of a "school of pharmacy," as stated by Dr. Greenhow. As a matter of general economics, it is most likely wiser on his part to take advantage of the facilities offered by certain establishments for the acquirement of certain branches of knowledge. But the question is whether all candidates shall be *compelled* to attend certain schools to be selected by the Pharmaceutical Council. The main argument in support of the proposition will be, we suppose, the old tale of cram. That "cram" is an evil associated with schools might be an argument against a curriculum at all, but for the moment let it stand for those who use it. Their plea is that students are so neatly posted with knowledge which they have got on their tongues but have not assimilated into their brains that examiners, though they know very well they have such a student before them, are unable to pierce his armour. They want, therefore, to have assurance that he has gone through a course from which he has at least had the chance of gaining sound knowledge. Without discussing the general topic of Examiners and Cram, which has been so often repeated, it must be borne in mind that the pharmaceutical examinations are understood to be con-

ducted by practical men, men who we suppose would scoff at the idea of not being able to judge of the competence of an assistant after seeing him actually at work at their own dispensing-counters. Here, when it becomes their actual duty to test him in every reasonable manner, is it a fact that a dozen of them acknowledge themselves beaten? The subjects, we say, are very different from those to which cramming has been most notoriously applied, and it will be certainly desirable to hear the examiners' own confessions.

We mention the matter now because there appears to exist an idea of bringing forward the subject rather indirectly at the International Pharmaceutical Congress in London, with the view, we suppose, of shaming us into an imitation of our eminent Continental visitors' fashions. Such imitation we would warmly urge if it can be shown that the fashions are better than ours and suited to our circumstances, but it must be remembered that the education which the Pharmaceutical Council have to examine upon is not that of chemical or botanical professors, nor that of public analysts or physicists. They are simply required to see in the public interest that those who profess to be chemists and druggists are competent to fulfil the responsible, but not necessarily highly-scientific, work devolving upon them.

WEIGHTS AND MEASURES ACT.

AMOUNT OF ERROR TO BE ALLOWED IN APOTHECARIES' WEIGHTS AND MEASURES.

A CIRCULAR dated May, 1881, has been issued by the Standards Office of the Board of Trade, containing suggestions as to the testing of apothecaries' graduated glass measures and apothecaries' weights.

The first point of importance is the amount of error to be allowed on the verification of glass measures. This is dependent to a certain extent on the diameter of the measure tested. The inspector is therefore advised to ascertain the diameter of one measure, and his "practised eye" will then be "a sufficient guide as to other measures of similar form."

In a measure whose internal diameter is approximately 4 inches an error of 22 minims in excess or deficiency is to be allowed; with a diameter of $3\frac{1}{2}$ in., 18 m. is to be allowed; with 3 in., 14 m.; with $2\frac{1}{2}$ in., 10 m.; with 2 in., 8 m.; with $1\frac{3}{4}$ in., 6 m.; $1\frac{1}{2}$ in., 5 m.; $1\frac{1}{4}$ in., 4 m.; 1 in., 3 m.; $\frac{7}{8}$ in., 2 m.; $\frac{3}{4}$ in., 1 m.; $\frac{5}{8}$ in., $\frac{3}{4}$ m.; $\frac{1}{2}$ in., $\frac{1}{2}$ m.; $\frac{3}{8}$ in., $\frac{1}{4}$ in.; *nil*.

Here follows in the circular a very incomprehensible sentence:—"These amounts would apply only to measures brought for verification, and not to measures already stamped or found by an inspector to be in use in shops," &c. This seems to mean that inspectors are to allow new measures to be inaccurate to the extent indicated by these amounts, but that if a measure is actually in use, or if it has been stamped, they are not to make this allowance; that is to say, they must be stricter in condemning measures in use than they are in passing new ones.

What a splendid field for officialism! An inspector examines a measure 4 inches in diameter, and finds that it is 22 minims deficient. The Board of Trade circular advises him to allow this error, and he therefore passes it as it is a new one. A month later he finds this measure "in use in a shop" still 22 minims deficient. The Board of Trade circular advises him not to make the same allowance for this measure as he did when he passed it, because it is now in use. He seizes the measure, and drags the unhappy chemist before the magistrates.

Of course this is not what the writer of the circular means,

but it is what his words imply, and as inspectors have no other way of getting at his meaning, it is what they will understand if they ever get to understand the sentence at all. There is another possible meaning. The amounts which would apply to measures found in use in shops are not "these" but some others at present unknown to us. This interpretation would, we fancy, be repudiated as indig- nantly as the other.

Another important point in the circular is the suggestion that the measure is to be "found correctly filled when the the bottom of the 'meniscus' or crescent formed by the surface of the water coincides with the graduation of the measure. If a measure is greasy or dirty the form of the meniscus will vary. A minute smear of vaseline, for instance, on a well-dried glass will almost cause the meniscus to dis- appear."

It is also suggested that a measure should not have too many graduations, ten being fixed as a limit for conical measures for ounces and drachms.

The following amounts of error are recommended to be allowed on the verification of apothecaries' weights:—

Denomination	Error in Grains allowed in Excess or in Deficiency	Denominations	Error in Grains allowed in Excess or in Deficiency
Ounces	Grains	Scruples	Grains
10	0.2 or $\frac{2}{10}$	2	0.03 or $\frac{3}{100}$
8		1½	
6		1	
4		¾	
2	0.1 or $\frac{1}{10}$	Grains	0.02 or $\frac{2}{100}$
1		6	
Drachms	0.05 or $\frac{5}{100}$	5	
4		4	
2		3	
1		2	
		1	0.01 or $\frac{1}{100}$
		½	

STORING ELECTRICITY.

A GREAT deal of interest has been excited during the past few weeks concerning a "marvellous box of electricity" sent from Paris by M. Faure, who had invented its construction, to Sir Wm. Thomson, of Glasgow, the eminent physi- cist. The missing link, which when found, will render electricity fully available to the human race, is a thoroughly efficient "secondary battery," or accumulator of the fluid or force, or whatever it may be. There are vast stores of power running to waste in the world, provided by Nature, and only waiting for this "secondary battery" to come into use. Every river as it runs towards the ocean might be a source of power; and, as Dr. Siemens not long ago showed, Niagara threw away power enough to do all the human work of the North American continent if it could be utilised. According to some accounts the dream has been realised. A correspondent of the *Times* (May 16), signing himself "F. I. R. S.," told how he had seen the box of electricity constructed by M. Faure worked in Paris. He had carried it from Paris to Glasgow; and within about 72 hours after charging, it had been placed in the hands of Sir W. Thom- son. The box measured about a cubic foot, and contained a power equivalent to nearly one million foot pounds! The writer told how suspiciously it was examined by the Customs and police authorities, who were probably not reassured when he explained that it contained only "condensed light- ning." Sir Wm. Thomson subjected the box to a variety of trials in his laboratory during three weeks, and then wrote to the *Times* declaring that their previous correspondent had been "by no means too enthusiastic as to its great practical value." He (Sir Wm. Thomson) sees in it "a realisation of the most ardently and unceasingly felt scientific aspiration"

of his life, an aspiration which he had scarcely dared to ex- pect or to hope to live to see realised. Sir Wm. Thomson finds that a Faure cell loses no appreciable energy within 10 days. It will have to be tested for a longer period before it is known how long such a cell will store the force, but, he says, "I have already ascertained enough regarding its qualities to make it quite certain that it solves the problem of storing electric energy in a manner and on a scale useful for many important practical applications." The first appli- cation made of it is interesting. Sir Wm. Thomson says:— "A few days ago my colleague, Professor George Buchanan, carried away from my laboratory one of the lead cells (weighing about 18 lb.) in his carriage, and by it ignited the thick platinum wire of a galvanic *éraseur* and blood- lessly removed a naevoid tumour from the tongue of a young boy in about a minute of time. The operation would have occupied over ten minutes if performed by the ordinary chain *éraseur*, as it must have been had the Faure cell not been available, because in the circumstances the surgical electrician, with his paraphernalia of voltaic battery to be set up beforehand, would not have been practically admis- sible."

Sir Wm. Thomson points out that the largest useful appli- cation awaiting the Faure battery is to do for the electric light what a water cistern in a house does for an inconstant water supply. He hopes this will be accomplished within a minimum of time. At present the electric light is depen- dent directly on the dynamic engine. A strap slipping may shoot a street into total darkness. With this battery elec- tricity may be accumulated through the day and used at night, and thus a great economy in working the engines will also be attained. Of course it would be easy to imagine some of the uses which are suggested by this discovery, if it should really prove equal to the value set upon it by so high an authority: but that is not necessary just now. A de- scription of the principle of the discovery is desirable.

Of course a Leyden jar accumulates electricity to a certain extent, but it only possesses what is called an "instan- taneous capacity." A secondary battery is one which accumu- lates currents which flow into it, and can discharge them gradually. Ever since Volta's discovery at the beginning of this century experiments have been proceeding with the object of accomplishing this end, but the battery of M. Gaston Planté, invented some twenty years ago, was the first which seemed to promise any real success. His battery consisted of two sheets of lead rolled spirally and separated by two sheets of canvass or india rubber and im- mersed in dilute acid. A strip of lead from the end of each sheet protrudes from the vessel and receives the charge, which induces chemical action and results in coating the sheet of lead at which oxygen was given off with a film of peroxide. By reversing the charging until both electrodes were formed the Planté cell became an accumu- lator of electric currents. M. Faure's cell is a modification of Planté's. Two sheets of lead are rolled together in a spiral, kept apart by a layer of felt, and with a strip of metal at the end of each sheet. The lead has been previously coated with minium or red lead, which is a lower oxidised compound than the dark brown peroxide formed in Planté's cell. The spirals are placed in acidulated water, and on being charged the minium on one plate is re- duced to metallic lead, and on the other is converted to the peroxide. As the discharge takes place a reverse action ensues. The box brought from Paris contains four cells, each of which weighed some 75 lbs. A writer in *Nature* (June 2, before the appearance of Sir Wm. Thomson's letter), commenting on the assertions that had been made, said, "there can be no doubt that this instrument, though

the accounts of its performances have been grossly exaggerated, is an improvement upon that of Planté, "and added a useful hint for those who read about a power of a million foot pounds without understanding the term: "Meantime, let us remind the enthusiast who brought over to England the million foot pounds of energy stored up in a Faure cell that he would have imported a dozen times as much stored energy if he had brought over instead a lump of coal of the same weight."

AN EXHIBITION OF SCIENTIFIC INSTRUMENTS.

THE annual meeting of the British Association for the Advancement of Science will this year be held at York, where, 50 years ago, its first meeting was held. To help to mark this jubilee year, it has been decided to hold an exhibition of instruments now used in scientific research, and the tools used in their manufacture, and, side by side with these, to show the instruments which were in use 50 years ago. The exhibition will be open only during the week of meeting, that is, from August 31 to September 8. A museum sub-committee has been formed, and full information as to conditions of exhibition will be supplied on application to the Hon. Secretaries, British Association Offices, 17 Blake Street, York. No applications will be received later than July 15.

PHARMACY IN ASIA MINOR.

M. PIERRE APERY, in the journal of the Pharmaceutical Society of Constantinople, gives some particulars of the condition of pharmacy in Trebizonde, Erzeroum, and Van. The first-named city, with a population of 45,000, contains one good pharmacy, that of M. Charalambos Garofalides, which is provided with a laboratory, is frequented by the physicians of the place, and seems to satisfy the most fastidious requirements. Dr. Spatharo has a smaller pharmacy, not so well kept; a third is mainly a grocery store, and the fourth and last is somewhat of a curiosity. It belongs to a Monsieur Marengo, who, besides being pharmacien, is dragoman to the English Consulate, dentist, Spanish Vice-consul, physician, and professor of languages. Medicines and poisons are likewise sold by many other shops of all kinds, with perfect disregard of the law.

Erzeroum has a population of 40,000, and the shopkeepers there also offend against the pharmacy laws of the Ottoman Empire. Dr. Lavini, an Italian physician, has the chief pharmacy. He has been an army doctor, and as he receives some Italian scientific journals, and seems to keep most of the new remedies, he is favourably regarded by the critic. But there are a few things against him. He sells matches, preserved foods, hams, and other domestic commodities. Another Italian, Giovanni Ricci, and an Armenian, named Onzonian Agop, keep the other two pharmacies of the town. The specialty of the latter is sausages and *bastourna*, or dried salt beef, for which he is rather noted.

At Van (20,000 inhabitants) there are three pharmacies. The chief one is the property of an Armenian named Artin Vahonmian. This gentleman acquired the rudiments of his profession in one of the popular barbers' shops of Constantinople. The Turkish barber is an institution. You stroll into his shop and take a seat. Coffee is brought to you; and, when you are disposed, and the proprietor is at leisure, you can have a wound dressed, a tooth drawn, your veins tapped, your beard shaved, or your hair clipped. Artin was first an assistant in one of these places, and afterwards owner of one. About ten years ago he went home to Van, and got some employment as dentist and dresser in the army. An

army doctor named Dr. Carlo fancied him, and between them they started a pharmacy some ten years ago. Artin is fairly bright, and his natural talents make up for any deficiency of education. The second pharmacien is likewise an Armenian, named Boghos Prot. He was formerly a cobbler at Harpont, where he came in contact with the American Medical Mission. He became a Protestant, and Dr. Reynolds, of the mission, assuming autocratic power, promoted Mr. Prot to be a pharmacien, and established him at Van. He dabbles in medicine and attends accouchements. The third pharmacy was opened quite recently by Dr. Mihram Vartazarian, who was sent from Constantinople to assist in the distribution of the relief fund collected on the occasion of the Armenian famine. He engaged a M. Ohannes to work a pharmacy there under his own auspices. Croton oil, bi-carbonate of soda, calomel, quinine, coffee, tea, sugar, and cognac are mingled together in the establishment, and, according to M. Apery's information, M. Ohannes scarcely knows one from the other.

The drugs, as a rule, are supplied to the pharmaciens by the drug merchants of the bazaars, and are generally falsified.

THE SOCIETY OF CHEMICAL INDUSTRY.

THE Society of Chemical Industry, whose formation we have already chronicled, puts forth indications of vigorous life, as will be seen by the advertisement of the first general meeting which we publish this month. The meeting will extend over Tuesday and Wednesday, the 28th and 29th of this present month, and will include an address from the President (Professor Roscoe), and papers on "Recent Legislation on Noxious Gases," by Mr. Muspratt; on "Coal Gas for Heating Purposes," by Dr. Siemens; "The Brewing of Lager Beer," by Professor Graham; "Mechanical Furnaces," by Mr. Mactear; "The Patent Laws and Chemical Inventions," by Mr. Mond, and other papers. It is likely that many men of eminent authority will take part in discussing the subjects brought forward, and it may be expected that really practical information will be contributed. A dinner on the Tuesday evening will relieve the more serious labours of the session.

THE FEEDING-BOTTLE AND ITS DANGERS.

THE newly-formed Paris Municipal Laboratory has to justify its existence, and will no doubt do so if it can establish the truth of the facts stated in the following paragraph. Some feeding-bottles having a fetid odour were lately brought by Dr. Du Mesnil from a *crèche* to the Paris Municipal Laboratory for examination. M. Fauvel found that the milk remaining in all smelt badly, was acid, and half-coagulated; the globules were deformed, and numerous very lively bacteria, along with some vibrios, were present. On cutting open the caoutchouc tube throughout its length, coagulated milk with small organisms was met with; but a still more important fact was the presence in the nipple of a mass of vegetation of cryptogamic nature. Sown in whey, this developed considerably in a few days. A visitation of all the *crèches* was arranged by the police and medical authorities, and the following was the result:—Of 31 feeding-bottles examined in 10 *crèches*, 28 contained, in the nipple, the caoutchouc tube, and in some cases in the glass-bottle, vegetations of the kind indicated, as well as bacteria, &c. Several that had been washed carefully, and were considered ready for use, still contained these cryptogams. Two feeding-bottles in a very bad state were found to contain

pus and blood corpuscles; the children who had used them had injuries in the cavity of the mouth. It is thus probable that saliva enters the feeding-bottle, and its ferments are added to those of the milk. The acidity of the milk is attributed by M. Fauvel to the bacteria present. If further investigation proves that the observations above-recorded are generally accurate, it will be desirable to recommend the frequent use of Condyl's fluid, or some such agent, wherewith to wash out the bottles and tubes.

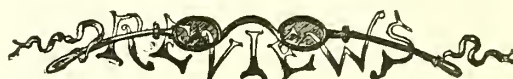
THE PHARMACEUTICAL SOCIETY OF VICTORIA.

MR. C. R. BLACKETT has been President of this Society for the past three years. This year he retires, and Mr. Wm. Bowen has been elected in his place. Mr. H. Shillinglaw has accepted for another year the office of honorary secretary. The Council have for some time past sought to establish sufficient means for pharmaceutical education, and to this end they have endeavoured, first, to obtain a grant of land for the purpose of erecting a suitable building, with laboratories, lecture-hall, museum, and offices, or, failing that, they have asked the Melbourne University to found a chair of pharmacy. They have not secured either of these results; but they appear to have made an excellent arrangement with the trustees of the Technological Museum. Courses of elementary and practical chemistry, botany, materia medica, and pharmacy will be at once established. The lecture-hall of the museum and its laboratories and apparatus will be available. Lecturers will be nominated by the Pharmacy Board, under whose guidance, in connection with the scientific superintendent of the museum, Mr. J. Cosmo Newbery, the institute will be carried on. The intention is expressed to "render our new institution, in its aspirations and design, in every respect identical with that of the School of Pharmacy of the Pharmaceutical Society of Great Britain."

SCIENTIFIC MEDICINE.

MONSIEUR PASTEUR has lately accomplished a remarkable triumph as the result of a thoroughly scientific investigation into the cause of a disease which has occasioned much alarm among the stock-breeders of France. The disease is known by the name of "charbon," and has particularly attacked sheep, to such an extent that it is estimated to have caused injury to the amount of several million francs a year. M. Pasteur's investigation led him to the conclusion that the malady is communicated by infected grass. The grass, however, is only infected where animals that have died of the disease have been buried. In these spots worms, after having fed on the diseased carcase, rise through the soil to the surface, collect round the roots of plants, are swallowed by the animals, and thus communicate to them the deadly virus. M. Pasteur has collected these worms. He separated the virus, and fully examined it, ultimately obtaining it in all conditions, from the most harmless to the virulent state. He then set up the theory that by inoculation the animals might be protected from "charbon." These theories, conceived in the laboratory, discussed before the Academy of Medicine, and warmly combatted, have lately been tested by practical experiments. On May 5 M. Rossignol's farm and 60 sheep were placed at M. Pasteur's disposal. Ten of these sheep were left untouched, in order that they might later on serve for comparison. Of the remaining 50, 25 were marked with a hole in their ears and were inoculated, the first time on May 5 and the second on the 17th. On May 31 none of the inoculated sheep had lost fat, or gaiety, or appetite. On May 31 the 50 sheep were taken without

distinction and inoculated with the strongest virus. M. Pasteur predicted that by June 2 the 25 sheep not inoculated would be dead, and that the inoculated animals would show no symptoms of sickness. On that date, therefore, a number of eminent spectators came together to witness the result. Things turned out as M. Pasteur had foretold. At 2 o'clock 23 of the sheep which had been inoculated were dead. At 3 o'clock died the twenty-fourth, and the twenty-fifth an hour later. The 25 inoculated animals were sound, and frolicked and gave signs of perfect health. Only one of the 25 inoculated animals had been feverish, but the fever had entirely disappeared. It was caused by the animal having designedly been inoculated with too strong a dose of the virus. The 25 carcasses were buried in a fixed spot, and on the infected grass which will grow over it experiments are to be made with the inoculated and non-inoculated sheep. But the experiment is complete for all practical purposes, and M. Pasteur has thus been able by the exercise of his remarkable scientific skill to confer on his country a benefit, the capital value of which is at once calculable, and would amount, no doubt, to some millions of pounds sterling.



AND

Literary Notes.

The Buyers' and Sellers' Guide to Profit on Return.
By Andrew Ferguson. Sixth edition. London: Effingham Wilson. Pp. 38. 1s.

A USEFUL series of tables, showing at one or more glances any percentage from 5 to 40 on any possible amount. The percentages are calculated on returns, that is, for example, an article costing 9*d.* and selling at 10*d.* appears as having produced 10 per cent.; but the same tables show that, calculated from the cost, this is equivalent to 11*l.* 2*s.* 2*3*/₄*d.* per cent.

Toothache.

"CASSELL'S FAMILY PHYSICIAN," Part 17, contains an article on "Toothache," from which we extract some items as to treatment:—

For Application.

A few drops of chloroform on cotton-wool inserted into the hollow of a decayed aching tooth often gives permanent relief, but sometimes when the anæsthetic effect has passed away the pain is aggravated, the application having irritated the inflamed pulp. A better plan is to hold over the hollow tooth a piece of lint moistened with chloroform, so that the vapour only comes in contact with the interior of the tooth. The preparation sold as camphorated chloroform often proves useful. A mixture of equal parts of chloroform and laudanum, or of chloroform and creasote, constitutes an excellent application.

Creasote may nearly always be employed with a fair hope of success. It may be mixed with an equal quantity of chloroform, or of laudanum, or with tannin. Laudanum, either alone or mixed with tannin or creasote, and inserted into the cavity of the hollow tooth, enjoys a high and well-merited reputation.

For cases in which the pulp is exposed and inflamed, a jelly is made by melting in a test-tube some crystallised carbolic acid, and then adding an equal quantity of collodion. A small quantity is placed on cotton-wool and inserted into the hollow painful tooth. It may at first somewhat aggravate the pain, but in a few seconds it diminishes and soon abolishes it. Care should be taken not to let it come in contact with the inside of the cheek, for, as we can testify from personal experience, it would give rise to considerable pain and smarting.

When there is a large hollow, and the pain is severe, a good application is a mixture of camphor and opium, of each 1 grain, made into a paste, with which the cavity should be filled, it having been previously dried by means of lint or cotton-wool.

When equal parts of chloral or powdered camphor are rubbed up together, they form a syrupy liquid. This will sometimes succeed in relieving tooth-

ache even when applied externally; but it is more likely to afford relief when introduced into the cavity of the decayed tooth on cotton-wool.

A plug of lint dipped in sulphurous acid, and inserted in the hollow tooth, will often give immediate relief.

For Internal Administration.

Grey powder proves useful in many forms of toothache, and is regarded by many as one of the best remedies for this complaint. It is used for toothache resulting from a decayed tooth. It proves of most value when the pain is gnawing, tearing, or boring in character, and is aggravated by eating, and also at night in bed, but is temporarily relieved by cold water. It is of value when the pain affects the entire side of the face extending upwards to the head, and backwards to the ears. It is especially indicated when the toothache is accompanied by an increased flow of saliva, and by profuse perspiration in bed, which fails to afford relief. In many cases it is a good plan to introduce a small quantity of grey powder, of course not mixed with sugar, into the hollow of the decayed tooth.

Aconite is useful in toothache arising from cold. It is especially indicated when the pain is sharp and stinging, and is relieved by cold water. This form of toothache is usually accompanied by heat of the face and chilliness. A drop of the tincture of aconite should be taken every ten minutes.

Belladonna is found to do best when there are shooting, throbbing pains affecting several teeth on one side, so that it is impossible to say exactly which tooth it is that is aching. This form of toothache not unfrequently shifts from place to place, and it is usually increased by both hot and cold applications. It is often accompanied by determination of blood to the head, flushed face, excessive sensitiveness to external impressions, such as noise or light, and by dryness of the mouth, and mental confusion. A drop of the tincture of belladonna should be taken every ten minutes.

Arsenic is used when the pain is grinding in character, when it is increased by touching the affected tooth, or by lying on the painful side. This form of toothache is usually increased by rest and by cold, but is relieved by moving about, and by the application of warmth. Arsenic is also indicated when the pains are jerking in character, or when they occur chiefly, or are much aggravated, at night. It usually proves of benefit when the sufferer is much exhausted by the pain.

Bryony is recommended when the pain is of a screwing character, when it is worse from warmth, is momentarily relieved by cold water, and more permanently by walking in the open air.

Nux vomica is found to be useful for darting pain in the teeth, and for toothache of a boring or gnawing character, especially when it comes on after dinner. A drop of the tincture of nux vomica may be taken every ten minutes for an hour.

Phosphorus should be given for tearing, shooting pains, worse in the open air, or after taking warm food. It is especially indicated when, in addition to decayed teeth, there are gum-boils.

Nitro-glycerine, or glonoine, is the remedy for pulsating toothache, accompanied by headache. A teaspoonful of the 1 per cent. solution should be added to a pint of water, and of this a teaspoonful may be taken every ten minutes till relief is obtained. It is a most valuable remedy.

Pulsatilla does good in cases where the pain comes on as soon as anything is taken into the mouth. The pain which is relieved by this remedy is worse in the evening, at night, and after the application of warmth.

Chamomile tea is indicated when the violent paroxysms of toothache come on from exposure to a draught, or from a sudden check to the perspiration.

Arnica is the remedy for pain in the teeth caused by mechanical violence. It does well in throbbing toothache, and in pain in the teeth as if they were being scraped. The tincture of arnica should be given in drop doses every ten minutes.

Chamomile is the remedy for the irritation produced in children by teething.

Gelsemium has been highly recommended for toothache. It is undoubtedly a very valuable remedy, but we are inclined to think that it does not do much good in pure toothache. It is the neuralgia arising from decayed teeth that it cures, and in these cases we believe that it stands unrivalled. Very frequently the pain of the decayed tooth and the neuralgia are experienced at the same time. If now gelsemium be given it will generally cure the neuralgia, but leave the toothache unaffected. This, of course, is an advantage by no means to be despised, for neuralgia is usually a much more obstinate complaint than toothache. Ten-drop doses of the tincture may be taken every hour for three or four hours, or Pr. 41 may be employed.

Another excellent remedy for neuralgia arising from a decayed tooth is croton chloral. It should be given dissolved in water in five-grain doses every four hours.

When toothache resists every other means of treatment we may have to resort to a hypodermic injection of morphia, but this is seldom necessary.

Prescriptions for most of the medicines recommended are to appear in Part 19 of the *Family Physician*.

THE *Union Medicale* (quoted in the *Medical Times and Gazette*) states that there are 110 journals published in Paris connected with medicine and pharmacy. There is either a misprint here, or else the word journal is used with a rather vague significance.

In an article in the *Fortnightly Review* on "Hindoo Households," Dr. Knighton tells us that it is a general Hindoo belief that it is the use of soda water which makes the English so strong. The effervescence of the liquid and its power to drive out the cork cause it to be regarded as a most potent beverage.

SPON'S "Encyclopædia of the Industrial Arts," Part XXI., contains a section on "Narcotics," including details on the cultivation and trade in opium in Turkey, Persia, India, and elsewhere. The cultivation of tobacco is also described. Under coca the writer remarks that the name is a corruption of the Aymara Indian word "khoka," which latter might well be resuscitated in order to avoid the confusion now often made between this narcotic substance and the cocoa (cacao) and coco (cocker-) nut respectively.

WE have received from Messrs. Christy & Co. No. 4 of "New Commercial Plants and Drugs," by Thomas Christy, F.L.S. There is an admirable combination of commercial and scientific enterprise in this publication. The first place in the present issue is again given to rubbers. Fodder plants are represented by "Improved Buckwheat," a variety combining the good qualities of the common and Tartarian. Sweet cayenne pepper—the subject of Mr. Greenish's paper at the last conference—is described, and four varieties are figured. Japanese and Chinese peppermint plant, and the palm, *Raphia Ruffia*, are the two remaining commercial plants treated. New drugs occupy the second and larger part of the pamphlet. Most of the drugs recently introduced are here treated in more or less detail, and some interesting new facts are given concerning many of them.

Homœopathy.

USEFUL DISCIPLES.—The *Homœopathic World* says:—"President Garfield is a homœopath, and hence our American brethren may expect fair play for Homœopathy. In fact, the *élite* of intelligence all the world over are adherents of our school.—Her Majesty the Queen of Wurtemberg has given a donation of 1,000 marks to the Wurtemberg Homœopathic Association Hahnemannia. The sum is to be added to the fund for the aid of poor medical students. Count Bissingen-Rippenburg is the president, and Baron William König von Königshofen is the vice-president of the Hahnemannia.

THE third annual dramatic performance on behalf of the London Homœopathic Hospital took place on March 19, at St. George's Hall, and was a signal success. Mr. Chambré, the Treasurer and Secretary of the Thalian Amateur Company, announced that the net profits to be handed over to the Hospital would amount to 110%. The programme comprised two farces and a comedy, and the acting was fully up to the usual high order of this well-known amateur company. The acting of Mrs. Conyers d'Arcy, Captain Conyers d'Arcy, and Mr. Douglas Fourdrinier was especially worthy of commendation.

QUININE FROM COAL-TAR.—There is considerable interest taken in trade circles over the report that a Liberty Street firm have applied for a patent for a process to manufacture sulphate of quinine from coal-tar. It is stated that the firm have been interested with a chemist to accomplish this for several years, and with favourable results. The firm in question are large importers of aniline colours, which, perhaps, explains how their attention has been directed to this new matter. When asked if they had obtained a patent for such a process, they stated "they had nothing to say."—*V. F. Com. Bulletin*.



BROWN WINDSOR SOAP.

ON June 1, 2, and 3, the actions of Benbow v. Low and Low v. Benbow came before Vice-Chancellor Bacon, at Lincoln's Inn. Mr. Aston, Q.C. (with him Mr. Willis Bund), in opening the case, stated that the plaintiffs in the first action carried on business as soap-makers at 12 Little Britain, and they sought to restrain the defendants, who carry on the business of soap-makers at 330 Strand, from interfering with the plaintiffs in the exercise of their right to manufacture and sell "Low's highly-perfumed brown Windsor soap." For many years prior to 1847, one Robert Low the elder, having carried on business as a wholesale and retail perfumer and soap manufacturer, at 330 Strand, in partnership with Robert Low the younger, in 1847 sold his share in the business to George Henry Benbow, and the partnership so formed was carried on until the year 1862. The firm of Low, Son & Haydon acquired great reputation for a soap known to the trade and the public as "Low's highly-perfumed brown Windsor soap." After the expiration of the partnership, Benbow continued to manufacture and sell the soap, and in order to distinguish their manufacture, they used a label which they had sought to register as a trade-mark. The defendants had registered their label as a trade-mark, and the question was whether or no at the dissolution of the partnership Messrs. Benbow acquired the right which they had continued to exercise down to the present time, and if they did not under the partnership acquire the right, had they not by their continued user from that time acquired the right to use the label as a trade-mark. The defendants denied the right of the plaintiffs to the use of the label, and by their action asked for damages sustained by them from the use of the label by the plaintiff. The plaintiff, Henry Benbow, being examined in support of this case, stated that in 1862 he commenced to manufacture the same kind of soap as had been made by the old firm in the Strand, and from time to time complaint was made by the defendants regarding the sale of Low's brown Windsor soap, but he still went on with the sale. In consequence of the defendants interfering with his American trade the present action was commenced. The witness, in cross-examination, admitted that he had not sold any soap for export under the name of "Low's brown Windsor" in 1876 or 1877, and only one lot in 1878. In re-examination, witness stated that the reason the trade fell off in 1876 and 1877 was because the defendants had intimidated the customers. Mr. John Thompson, a member of the firm of Maw, Son & Thompson, deposed to being present when the plaintiff solicited orders from American firms for "Low's brown Windsor soap." Cross-examined: If I received an order for "Low's brown Windsor soap" I should go to the defendants for it. A file of the *New York Herald*, brought from the library of the British Museum, proved that the plaintiff had advertised the soap as "Low's brown Windsor soap." Mr. Francis Benbow stated that he was in partnership with his brother, and that they had manufactured Low's brown Windsor soap since the year 1862.

Mr. W. W. Karslake, Q.C. (with him Mr. Byrne), for the defendants, contended that the plaintiff upon the dissolution of the partnership, having been paid between 4,000*l.* and 5,000*l.* as his share of the business, assigned the whole of the wrappers and labels to the defendants, and consequently had no further right to use the title now in question. It was not until the spring of 1863 that the defendants learned that their old friend and partner was making use of the labels in the American market. Immediately this came to their knowledge they took counsel's opinion, and were advised to file a bill for an injunction. Not wishing to rush into litigation, they communicated with

the plaintiff, who at once ceased to sell soap under the name of "Low's highly-perfumed brown Windsor soap." Mr. Lewis E. Howard, a member of the firm of Howard Brothers & Reed, of New York, deposed that his firm were the sole agents of the defendants for the sale of the soap in the United States, and had special instructions to look after imitations. Several actions had been brought against infringers, and these cases had all been decided in favour of Messrs. Low. Mr. Robert Thomas Haydon stated that previously to 1878 it did not come to his knowledge that Messrs. Benbow were selling "Low's highly-perfumed brown Windsor soap." Mr. Alfred Low also gave evidence to the effect that he did not know that the plaintiff was offering soap under the name complained of for sale until 1878. He had heard it mentioned in 1863, and tried to find a case so that he might take proceedings, but was unable to do so. Evidence was also given by different merchants that they had never heard of Benbow's "Low's highly-perfumed soap."

On June 3 the Lord Chancellor delivered judgment in favour of plaintiff, with costs. He said that on the dissolution of the partnership each party had a right to use the term "Low's highly-perfumed Windsor soap." Having gone through the facts of the case, his Lordship said the plaintiff was, in his opinion, entitled to a declaration that he had a right to use the term above mentioned, and also to use the labels, not, of course, intimating or asserting that Low was the actual manufacturer; and the counter-claim of Messrs. Low must be dismissed. He was also of opinion that the plaintiff was entitled to an order that the trade-mark should be registered, notwithstanding the same mark had also been registered by the defendants.

BANKRUPTCIES AND LIQUIDATIONS.

R. S. CAMPBELL, Wholesale Chemist, St. Helens, Lancashire.

THIS case was brought before the Chief Judge, Sir J. Bacon, on May 30, upon the hearing of an appeal from the Liverpool County Court. The trustee of the estate had applied to the County Court Judge for an order setting aside a bill of sale dated November 27, 1879, made by the bankrupt in favour of Mr. Joseph Massey, solicitor, St. Helens, upon the following grounds:—(1) That the deed did not truly set out the consideration for which it was given; (2) that it was a fraudulent preference, and given without valid or sufficient consideration; (3) that prior to the date of the deed the bankrupt had committed one or more acts of bankruptcy, of which Mr. Massey had notice; and, lastly, that the deed was itself an act of bankruptcy. The application having been refused by the County Court Judge, the trustee appealed. Mr. F. Knight appeared in support of the appeal, and Mr. Winslow, Q.C., and Mr. McConkey on behalf of the respondent. After hearing the evidence and the arguments of counsel, Sir J. Bacon delivered judgment. He said he had to consider whether the bill of sale was an act of bankruptcy of which the trustee, who was the present appellant, could avail himself. In June, 1879, the bankrupt filed a petition for liquidation, and resolutions for the acceptance of a composition of 4*s.* in the pound were passed and registered. If the necessary conditions had been complied with he would have been restored to his property, but before he was entitled to his discharge he had to pay the costs of his solicitor, Mr. Massey, and of Mr. Bolland, the receiver. Mr. Bolland having waited, as he thought, an unreasonable time for payment, issued a writ for his charges, and an arrangement was come to by which Mr. Massey, the solicitor, was to pay off Mr. Bolland, and take a bill of sale from the bankrupt as security for the money so paid, as well as for the amount of his own charges, Mr. Massey also making the bankrupt an advance of 10*l.* to assist him in his business. Was there anything unreasonable in such an arrangement? The property was assigned to Mr. Massey, and he took possession under his bill of sale. In his (the chief judge's) opinion there was a distinct and *bona-fide* intention not to delay the creditors, but to enable the debtor to carry on his business and pay his creditors, which might have been accomplished if he had not been

addicted to habits of intemperance. It had not been shown that the bill of sale was an act of bankruptcy available for adjudication, and it seemed that, on possession being taken, everything was done to realise the business satisfactorily. He held that the bill of sale was perfectly valid in all respects, and that the County Court Judge could not have dealt with the subject in any other way than he had done. The appeal was accordingly dismissed with costs.

J. A. FERRIS, Chemist and Druggist, Buckingham Palace Road and Victoria Square.

THE debtor, carrying on business under the style of "Ferris & Co.," and described also as a surgeon, has filed a petition for liquidation, and his affairs were brought before Mr. Registrar Brougham on May 19. Mr. McLeod (of the firm of Hadden, Woodward & McLeod) applied for the appointment of Mr. W. H. G. Bodle, of 26 Buckingham Palace Road, chemist and druggist, as receiver and manager of the estate, also for an injunction restraining proceedings at the suit of Messrs. W. H. Smith & Son, 186 Strand, for the recovery of 112*l.* 10*s.*, and of Mr. C. Fish, of Cambridge Wharf, Pimlico, for 406*l.* 11*s.* 10*d.* The liabilities were estimated at 2,500*l.*, and assets at about a like amount. The debtor deposed that Mr. Bodle had acted as his manager for about 13 months, and was duly qualified to carry on the business. His Honour appointed Mr. Bodle to the office of receiver, and granted an injunction. The following were returned as creditors, secured and unsecured:—

	£	s.	d.
Baiss Brothers, Jewry Street, E.C.	26	10	0
Best & Sons, Henrietta Street, W.	14	0	0
Blake, McKenzie, Liverpool	19	1	0
Bowles & Cross, Lambeth Hill	47	1	6
Cuttance, —, Collegiate School, Kilburn	53	0	0
Dyke, G., 70 Cambridge Street, S.W.	23	0	0
De Patva & Co., Mincing Lane	33	15	0
Fish, C., Cambridge Wharf, Pimlico	406	0	0
Ferris & Williams, Great Sutton Street	23	9	0
Fairless & Beeforth, New Bond Street	21	3	0
Golding, —, 19 Conduit Street, W.	34	3	0
Grover, —, 35 Buckingham Palace Road	23	16	6
Herrings & Son, Aldersgate Street	85	0	0
Higgerty, —, 36 Great George Street	13	3	0
Lefever, E., 2 Carey Lane, E.C.	450	0	0
Moore & Son, 145 Fleet Street, E.C.	41	5	0
Meggeson & Co., Miles Lane	22	0	0
Maw, Son & Thompson, Aldersgate Street	85	0	0
Napier, —, Bread Street Hill	40	0	0
Ralph & Son, 150 Strand	24	15	0
Sanger & Sons, Oxford Street, W.	60	0	0
Smith & Son, W. H., 186 Strand	113	15	4
Secretary Consolidated Credit and Mortgage Corporation	390	0	0

ROBERT GEDDES, 226 Saracen Street, Glasgow.

THE bankrupt, who was a chemist carrying on business at 226 Saracen Street, came up for examination before the Glasgow Bankruptcy Court on May 23. Sederunt:—Mr. A. F. Hamilton, C.A., trustee, and Mr. Alexander S. Drummond, writer, law-agent in the sequestration. The bankrupt deposed that he commenced business two years ago at 226 Saracen Street, with a capital of about 200*l.* He first found himself in difficulties about twelve months ago. He executed a trust-deed, which was followed by a deed of arrangement, but it fell through. He accounted for his losses by bad trade and a loan of 160*l.*, no part of which he had ever been able to recover. He never kept any books. He got advances from relatives from time to time. The valuation of his stock in his state of affairs was, he now believed, excessive. His liabilities were 223*l.* 3*s.* 7*d.*, and he state of affairs showed assets amounting to 215*l.*, but he did not think they would realise that sum. The statutory oath was administered.

JOHN LOMAS, Chemical Manufacturer, 7 Fenchurch Street, E.C.

THIS case was also noticed last month. The bankrupt, trading as above, and at the Wepre Chemical Works, in the county of Flint, and the Canal Side Chemical Works, in the City of Chester, was adjudicated on May 19 upon the petition of Mr. Arthur Jackson, of 22 Liverpool Street. The act of bankruptcy was the departure of the bankrupt from England on April 11 with intent to defeat or delay his creditors. No accounts were furnished, but proofs of debt for about 1,400*l.*

were admitted, and Mr. Jackson (the petitioning creditor) was appointed trustee, together with a committee of inspection, namely, Mr. James Cobb, 21 Finsbury Pavement; and Mr. W. Parkin, of Arnold, Nottingham. Next meeting the 24th inst.

LUNTLEY & MILNER, Wholesale Druggists, Bread Street Hill.

THIS bankruptcy, which was referred to in our last issue, occurred so far back as the year 1828, the bankrupts then carrying on the business of wholesale druggists in Bread Street Hill; a dividend meeting was held on May 31. Mr. March (in the official assignee's office) reported that 2,100*l.* was in hand, of which the bulk had been received during the present year, and which had been transferred from the separate estate of Mr. Luntley to the credit of the joint estate. The usual order was made, and the fund will be distributed in due course amongst the surviving creditors or their representatives.

H. T. MAPLESON, Chemist and Druggist, Devonshire Street, W.

THIS case was noticed in our last issue. The debtor, carrying on business in the name of J. Thomas, and described also as a surgeon, had filed a petition for liquidation, and at the meeting of creditors held on May 16 resolutions were passed for the acceptance of a composition of 3*s.* in the pound, payable in 14 days from the date of registration. The accounts showed liabilities to the amount of 3,495*l.* 18*s.* 8*d.*, and debts fully secured 370*l.*; with assets, book debts estimated to produce 450*l.*, and surplus from securities 55*l.* The following were returned as unsecured creditors:—

	£	s.	d.
Ashley's Executors, 20 Grafton Street, W.	30	0	0
Barnes, A., Evans' Hotel, W.C.	11	0	0
Batt, H., North Row, W.	123	2	6
Bassett, —, 24 Northumberland Street	29	3	0
Becher, 5 Endersleigh Street	354	10	0
Cradlock, —, Weymouth Street, W.	76	0	0
Claret, —, Munster Street, N.W.	70	0	0
Ching, Miss, Beaumont Street	20	0	0
Clay Cross Coal Company	14	0	0
Davis, E., 318 Holborn	85	0	0
Drewell, —, Weymouth Street, W.	20	0	0
Fisher, Susan, Tufnell Park Road, N.	27	17	6
Fehrenbach, —, High Street, Marylebone	12	18	0
Farred, —, 42 High Street, Marylebone	16	15	10
Geare, —, John Street, Edgware Road	20	0	0
Grimstone, Captain, Weymouth Street	16	16	6
Holker, Sir John, Devonshire Street	202	4	9
Hill & Co., 103 Southwark Street	19	15	0
Hensor, Miss, Kentish Town	29	0	0
Jones, —, Marylebone Road	79	15	0
Lumley, W., Ulster Place, N.W.	33	1	0
Lintott, —, Dorset Square	15	0	0
Lawrence, F., 21 Berners Street	23	0	0
Maple & Co., Tottenham Court Road	10	5	0
Mapleson, Miss, Prince's Square, W.	320	0	0
Methley, Messrs., 150 Fenchurch Street	17	15	0
Pretorius, —, 45 Weymouth Street	21	0	0
Powell, —, High Street, Marylebone	10	0	0
Rowe, J., High Street, Marylebone	16	15	4
Silence, —, Seymour Street, Euston Square	10	0	0
Selham, Dean & Co., Coventry Street	400	0	0
Sich & Co., Chiswick	12	0	0
Tuck, H. C., Stanley Gardens, N.W.	10	19	8
Wilson, A., Bagdott Street, Dublin	10	10	0
White, —, 80 Lisson Grove	200	0	0
Wertheimer, A., 21 Cornwall Terrace, N.W.	63	0	0

Fully Secured.

Imperial Discount Company	145	0	0
Setree, Miss, Westmoreland Road, W.	225	0	0

The case came before Mr. Registrar Brougham on May 19. Mr. De Fivas applied for a further injunction restraining actions pending the confirmation of the resolutions passed by the creditors. His Honour granted the application.

JOHN WILLEY, Hoyland, near Barnsley.

ON May 12 the first general meeting of the creditors of Jos. Willey, chemist and druggist, of Hoyland Nether, near Barnsley, was held at the offices of Messrs. Parker & Hickmott, solicitors, Barnsley. The liabilities amounted to 1,225*l.* 9*s.* 10*d.*, and the assets to 595*l.* 6*s.* 1*d.* It was resolved to liquidate the estate by arrangement, under the following committee of inspection:—Mr. J. H. Watson, manager of the Wakefield and Barnsley

Banking Company; Mr. Thos. Brooke, wholesale druggist, Leeds; Mr. C. Alexander, accountant, Barnsley; Mr. R. W. Winter and Mr. R. Mountain, commercial travellers. Mr. N. Crossby, accountant, of Barnsley, was appointed trustee. Messrs. Parker & Hickmott were appointed solicitors to the trustees, and were ordered to register the resolutions.

W. W. YOUNG, Chemist, 225 Jamaica Road, S.E.

THIS case was noticed in our last issue, and a meeting for the bankrupt's public examination was held on May 24 before Mr. Registrar Pepys. The statutory accounts had not been filed, but the bankrupt stated that they were in the hands of his solicitor, and his Honour granted an adjournment.

Scientific Notes:

On Chemistry, Pharmacy, Botany, Materia Medica, &c.,
Original, Selected, and Translated.

DISSOLVING SALICYLIC ACID.

DR. SQUIBB, in *Gaillard's Medical Journal*, says:—"There is no way known to me whereby salicylic acid can be dissolved in water to any useful strength, and kept as free acid. When borax is used, a solution of any desired strength may be made. But a double salt is said to be formed, and therefore it is not a solution of the acid. The best plan that I know for getting the effect of the free acid is to take the amount of water and of acid desired, and then add bicarbonate of soda until solution is effected. This makes the solution of the acid in a solution of sodium salicylate."

ASPIDOSPERMINE.

THIS alkaloid, which a few months ago was in great demand, has almost sunk into oblivion, which is probably due to the difficulty of preparing it in a state of purity, the quebracho bark containing it in only very small quantities. (See this *Journal*, February, 1881, page 82.) The authors consider that the citrates and sulphates of aspidospermine, which have an extremely bitter taste, deserve more attention than the alkaloid itself, which is very difficultly soluble in water, and has hardly any taste at all.—*Gehe & Co.'s Trade Circular (Dresden)*.

ARTIFICIAL INDIGO.

THE Baden Aniline and Soda Works have obtained the prerogative of manufacturing this article according to Professor Baeyer's patent, and are indefatigably occupied in endeavouring to render its production on a large scale an industrial possibility. It appears that, on the occasion of its maiden appearance in the market, artificial indigo will have the character of a yellowish-white powder, in which form the authors consider it will in the first instance meet with opposition, but they have no doubt that the new tar product will in the course of a reasonable time compete successfully with natural indigo.—*Gehe & Co.'s Trade Circular (Dresden)*.

COMPOUNDS OF THE PYRROL GROUP.*

G. L. CIAMICIAN, of Rome, considers that the Pyrrol group may be compared with the Benzol group. He has found that homopyrrol, which, as is known, occurs in bone oil, is a mixture of two isomeric compounds, the one boiling at a temperature between 140° C. to 141° C., the other between 145° C. to 148° C.

CRYSTALLINE ALKALOIDS OF CERTAIN OIL SEEDS.†

H. RITTHAUSEN has, by treating the oleaginous seeds of a number of plants with solutions of salt of different densities and of different degrees of strength, obtained from them alkaloids in a crystallisable form.

COMMERCIAL OIL OF WINE.*

FROM the researches of Ernst C. Hartwig, it appears that the substance technically known by the name of "oil of wine" is not, as is generally supposed, a mixture of so-called heavy and light oil of wine, but is a mixture of a number of compounds of a more or less complicated nature, amongst which the author has found hydrocarbons, ethers, and ketones.

A NEW GROUP OF VOLATILE ORGANIC BASES.

ACCORDING to a preliminary notice sent to the *Berichte der deutschen chemischen Gesellschaft*, May 23, 1881, Victor Meyer and F. P. Treadwell, by reducing nitrosoketones with sodium amalgam, or tin and hydrochloric acid, have obtained a group of well-characterised non-oxygenous bases of the composition $C_nH_{2n-1}N$, to which they have given the name ketines. They all distil without decomposition, and form with water, like chloral, beautiful crystalline compounds.

The authors reserve a fuller account of this group for a future paper.

LUPININE.†

GEORG BAUMERT has examined lupinine very carefully, and found that none of the formulæ usually assigned to it are correct, the alkaloid having in reality a composition represented by the formula $C_{21}H_{40}N_2O_2$.

In a pure state lupinine forms beautiful white rhombic crystals of a fruity odour and a very bitter taste. They melt at 67° C. to 68° C. Heated in a current of hydrogen to 255° C. to 257° C., lupinine distils over unaltered. Lupinine expels ammonia from its salts, and at a high temperature becomes easily oxidised.

A DELICATE TEST FOR CAUSTIC ALKALIES.‡

CAUSTIC alkalies, especially ammonia, produce in solutions of tannic acid a colouration varying from red to reddish brown, which after some time passes into a dirty green. The reaction is so delicate that an aqueous solution of caustic potash or ammonia, in the proportion of 1 part alkali to 1,000,000 parts water, yields a perceptible colouration with a solution of tannic acid. A solution so much diluted of this kind gives no reaction with litmus, and the author of this paper—W. Bachmann—therefore proposes the employment of tannic acid for detecting traces of caustic alkalies.

The normal and acid salts of the alkalies give no reaction with tannic acid.

CONCENTRATED ETHEREAL OILS.‖

OUR knowledge of the ethereal oils is still very deficient in many particulars. Only a few, like bitter-almond, winter-green, and thyme oils, have been sufficiently studied to make us acquainted with the compounds of which they consist, their chemical constitution, and their rational formulæ. Of others only the acidulous constituents and the stearoptens which crystallise out have been accurately investigated. Godeffroy has recently done this for bergipten. Some essential oils, like turpentine, juniper, lemon and orange peel oils, are said to contain no acid constituents. These oils, with the exception of turpentine oil, have been only very slightly examined, and we know little more than the empirical formula of the hydrocarbon $C_{10}H_{16}$, which is common to them all. Even the latest experiments of Flüchiger and Power on the non-acid constituents of peppermint oil tell us little more than these substances, though melting at different temperatures, still correspond to the previously-determined empirical formula or to multiples of it. In oils distinguished as acidulous the constituent which is the aromatic principle, and which gives the oil its value, is commonly that in which the acid is found.

But in at least two oils which have hitherto been regarded as free from acid I have proved that the aroma and

* *Berichte der deutschen chemischen Gesellschaft*, May 9, 1881.

† *Journal für praktische Chemie*, April 30, 1881.

* *Journal für praktische Chemie*, April 30, 1881.

† *Berichte der deutschen chemischen Gesellschaft*, May 23, 1881.

‡ *Zeitschrift für analytische Chemie*, 2tes Heft, 1881.

‖ Dr. Ewald Geissler in *Pharm. Centralblatt*, May 26, 1881, p. 223.

flavour are due to an acid constituent, and that this substance can be separated from the bulk of the oil. These facts came out in an investigation of patent lemon and patent orange-peel oils, two of the so-called patent ethereal oils made by Heinrich Haensel, of Pirna. These are called "patent" because the apparatus in which they are prepared has been patented. "Concentrated ethereal oils" would probably be a better title, and the properties of the oils would thoroughly justify it.

Both these essential oils have a far higher specific gravity than the corresponding ordinary oils, which vary between .850 and .860; patent lemon, sp. gr. .9003; patent orange peel, .9090.

Metallic sodium added to the oils causes chemical action, which oxidises the sodium, the action being specially quick and abundant with the lemon oils. Both oils, therefore, contain acids.

In their other properties these oils show that they differ much from the ordinary oils of orange peel and lemon. They mix in all proportions with alcohol (of 88 per cent. by volume), and even give, with 60 to 65 parts of 70 per cent. alcohol, a perfectly clear, and, with double the quantity of 60 per cent. alcohol, a slightly turbid solution. They neither become heated nor give off vapour when mixed with iodine.

The odour and flavour of these oils is extraordinarily intense, indeed, the ordinary oils cannot be compared with them. It is this which specially distinguishes them and suggests for them the name of "concentrated," while it proves that the aroma of the oil is due to its acid constituents, which in the ordinary oil are present in such small quantities that they have been overlooked hitherto by all investigators. According to the makers, the concentrated are equal to 30 times their bulk of the ordinary oils.

ETHEREAL CASTOR OIL.

M. PRODAM, a pharmacist of Fiume (Austria), has obtained from the castor seeds, by treating them with ether, not only the oil which would not be purgative by itself, unless it contained some of the active principle known as *ricinine*, but his solution also contains this principle in larger proportion. He is thus able to get the purgative effect of the oil by a smaller dose, and without the disagreeable taste of the ordinary oil. His preparation has further the advantage of being miscible, in any proportion, with water, coffee, or milk.

CHINAMINE.

IN Liebig's "Annalen der Chemie," May 7, 1881, O. Hesse gives as the result of his researches on the subject the following description of chinamine:—

Occurrence.—Chinamine was first obtained by O. Hesse, from the bark of *cinchona succirubra*, cultivated in British India; later on by de Vrij, from a similar bark of Rungbee; then by Howard, from the bark of a hybrid of *cinchona succirubra* and *c. calisaya*. Improved methods for testing the presence of the alkaloid have proved its presence in a number of other barks, and especially in that of *c. calisaya* var. *Ledgeriana*.

Preparation.—The raw mother liquor from sulphate of quinine is treated respectively with sodio potassic tartrate (seignette salt) and ammonia to remove all alkaloids precipitable by these re-agents; the precipitates are then washed with ether, and the washings mixed with acetic acid. This solution is then neutralised, and, after having been gently heated, mixed with potassium sulphocyanate until upon cooling no more cinchonine can be detected. The clear solution is then precipitated with a solution of caustic soda, and the resinous precipitate dissolved in a sufficient quantity of alcohol of 80 per cent., whereupon chinamine crystallises out on cooling, and is purified by treatment with animal charcoal and re-crystallisation from dilute alcohol.

Composition.—Chinamine may be represented by the formula $C_{19}H_{21}N_2O_2$.

Properties.—Chinamine is easily soluble in ether, strong alcohol, and petroleum ether, the solutions exhibiting an alkaline reaction. It crystallises from solutions of the kind

in long delicate prisms, resembling asbestos, without water of crystallisation. It is, however, but very slightly soluble in dilute alcohol, and is insoluble in water. Even solutions of the caustic alkalies fail to dissolve the base, but precipitate it from solutions of its salt in the crystalline form.

Chinamine readily forms salts, which have a bitter taste, although the pure base is not perceptibly bitter.

Chinamine melts at $172^{\circ}C$, and, if the heating is but of short duration, crystallises upon cooling. If, however, the heating is protracted, it turns brown, and assumes upon cooling an amorphous condition.

Unlike quinine, the dilute acid solutions of chinamine salts show no fluorescence. Compared with the other known alkaloids occurring in cinchona bark, chinamine mostly resembles paytine.

Salts.—Chinamine is a monacid base, and forms, accordingly, only neutral and monacid salts. The latter are amorphous, and very unstable.

MOVEMENT IN PLANTS.

A FINE example of the value of united work may be seen in the Darwin family, in which household science and home influences dwell most happily together. The father devotes some years to minute botanical investigation; one son illustrates the resulting book, and the other turns editor and corrects the proofs. Just recently we have an elaborate treatise, intelligible only to advanced students of nature, on "The Power of Movement in Plants," written by the elder Darwin. Francis assists throughout, and also reads a paper before the Linnean Society in confirmation of the theory there propounded. This elaborate contribution is on "The Power Possessed by Leaves of Placing Themselves at Right Angles to the Direction of Incident Light." Various experiments were made with plants, specially with beans (*Vicia faba*), vegetable marrow (*Cucurbita orifera*), plantain (*Plantago media*), and cherries, the result of which was, in the main, to show that the behaviour noticed was due to a specialised sensitiveness to light, called diheliotropism, which is able to regulate or govern the action of other external forces, such as gravitation, or of internal forces, such as epinasty.

An instrument called the klinostat, arranged by Horace Darwin, was employed in working out these conclusions. It was an adaptation of the original piece of apparatus devised by Professor Sachs, and its mechanism is described at length. It consists of a cylinder rotating slowly about its longitudinal axis on which the seedlings under observation are grown. The cylinder being placed at a window, the plants are protected from all illumination except such as falls on them in a direction parallel to the axis of rotation. The cylinder rotates so slowly that no centrifugal action is produced on the plants, but rapidly enough to destroy all geotropic action. The seedlings, therefore, are entirely free to obey the stimulus of light, and their heliotropic curvature is not liable to be influenced by gravitation. The method of slow rotation, as it exists in modern physiological research, is entirely due to Sachs.

The driving force is supplied by a common American watch-action clock. With this machine, says Mr. Darwin, "I have easily been able to keep a box of earth, and a plant weighing 1,000 grams, in constant rotation with the certainty that it will not stop. By gearing a stronger clock to the driving wheels, a very much heavier weight could easily be driven."

CASSIA LIGNEA.—Among the exports from Canton in 1879 that of cassia lignea showed a remarkable advance of over 24,000 piculs, from 72,168 to 96,778. The cassia is of three different kinds, which derive their names from the districts where they are produced, of which Loting and Luehp are in Kwangtung and Taiwoo in Kwaugsi. It is largely used by tanners and carpenters, and is in special demand in the preparation of medicine and perfumery. The export is chiefly to America and England, but small shipments are also made to India and the continent of Europe. The cost at the places of production may be quoted at 6 taels per picul, but by the time the produce is put on board ship for exportation it has had to pay accumulated taxes amounting to 50 per cent. of its cost price, or $42\frac{1}{2}$ per cent. in excess of the dues and duties authorised by the tariff.

Poisoning Cases.

ACONITE LINIMENT.—Eliza Patmore, aged 21, cook, in the employ of Messrs. Brickwell, surgeons, Sawbridgeworth, committed suicide on June 2 by swallowing 3 oz. of aconite liniment, the largest recorded dose of this poison.

BELLADONNA PLASTERS.—The *New York Times* states that a physician in that city had observed two cases in which symptoms of poisoning had followed the application of belladonna plasters.

VERMIN-KILLER.—On May 24 Mrs. S. E. Parker, of Bournemouth Road, Peckham, committed suicide by taking Battle's vermin-killer. The coroner, Mr. Carter, expressed his surprise that the Legislature did not step in to regulate the sale of such an article.—On May 26 Daniel Willis was charged in the Salford Borough Court with attempting to commit suicide by taking a *3d.* packet of vermin-killer.—An inquest was held on May 10 at Oldbury on the body of Mary Pugh, aged 47. The medical witness attributed the death to poisoning by strychnine.

CHLORODYNE.—Flora Marsh, aged 23, took a bottle of chlorodyne from a cupboard in a ward of the Liverpool workhouse hospital and drank its contents. She died on May 10. Verdict, "Died from poisoning by chlorodyne, ignorantly taken as a stimulant."

GODFREY'S CORDIAL.—At Coventry, on May 25, "the child of a chemist's assistant named Smith, being unwell, its mother, who had been accustomed to administer Godfrey's cordial, administered half a teaspoonful, or about 28 drops, of the cordial, and the child died within three hours."

YEW.—During the second week of May seven bullocks died at Kames, West Mains, Berwickshire, from the effects of eating yew-cuttings from a hedge.

HEMLOCK.—Two children of a shoemaker, named Murphy, in Macroom, co. Cork, have been poisoned through eating hemlock, and a third has been dangerously ill from the same cause.

CAUSTIC SODA.—On March 17 a man named Lloyd, employed at Messrs. Hunt's chemical works, Wednesbury, took home some caustic soda, and made a solution of it in a basin of tea. His son, aged 4, drank it in his father's absence, and died after prolonged sufferings on May 21.

CHLORAL.—At Leith Mr. John A. Lennon, Warwick House, South Fort Street, died on June 2 from an overdose of chloral, taken to induce sleep. Deceased had qualified himself for the medical profession.—At an inquest held at Leeds on May 20, on the body of John Wood (42), druggist's assistant, Merrion Place, Mr. W. M. Hurtle, surgeon, attributed death to narcotic poisoning, probably with chloral.

LAUDANUM.—On May 31 Ann Johnson, widow, was admitted to the Glasgow Royal Infirmary, suffering from the effects of laudanum poisoning. She recovered.—Peter Hawick, commercial traveller, died on June 2 in the Edinburgh Royal Infirmary, from the effects of an overdose of laudanum.—On May 31 A. C. Dunn, Campden Place, Glasgow, was found dead in bed, having committed suicide by taking laudanum.—On May 28 a labourer employed in the chemical works of Messrs. T. & H. Smith, Edinburgh, was admitted to the Royal Infirmary there, apparently suffering from the effects of a narcotic; he died a few hours after admission.—(On May 13 Ann McGorrigan), or Cameron, (39), Glasgow, swallowed threepence-worth of laudanum, and died a few hours afterwards from the effects of the draught.—At Retford on May 18, Mrs. Footit purchased some laudanum from Mr. R. S. Warde for "curing the toothache," and drank it. She recovered under treatment.

CARBOLIC ACID.—William Longshaw, jun., of the firm of W. Longshaw & Sons, chemical manufacturers, Warrington, died on May 28 from the effects of about 8 oz. of crude carbohc acid, drunk by mistake for herb beer.—J. Cooper, farmer, of Spynie, near Elgin, died on June 1 from the effects of carbohc acid. The bottle of carbohc acid had been placed where his medicine generally stood, and he took the poison without noticing the change.

Foreign and Colonial.

PRESCRIPTIONS ORDERING POISONS.—The Paris Préfet de Police has just had all the walls placarded with an ordinance issued as long ago as 1846, according to which all practitioners exercising their calling within the jurisdiction of the prefecture are enjoined, when writing prescriptions containing any poisonous substances, to write out the doses in full instead of employing figures; and all pharmaciens are prohibited from dispensing any prescriptions in which this rule is not observed.—*Medical Times and Gazette.*

GERMAN OIL OF CLOVES.—Schimmel & Co. (in the *Droguisten Zeitung*, May 20, 1881), the celebrated distillers of essential oils in Leipsic, in alluding to the new tax (May 1, 1881) of 50m. per cwt. of clove stalks imported into Germany, which at the same time involves the control of the distillation by a Government officer, and the destruction of the residues of such distillation under his supervision, remark that although they are, in principle, in favour of free trade, they consider this tax useful as a radical cure for the disgraceful practice of selling exhausted clove stalks.

CHEMICALS FOR JAPAN.—From a circular issued by Messrs. Cocking & Co., of Yokohama, we take the following remarks, which are of some importance to manufacturers of chemicals:—"A leading feature in the present policy of the Government seems to be the initiation of what the Japanese are pleased to call 'direct trade,' and, with this end in view, a number of native companies or associations have been started under the wings of Government patronage, and no doubt, if the truth were known, by means of Government money also. This 'direct trade' means that the Japanese wish to do both the export and import business of the country without the intervention of foreigners; in fact, it is a step backward, and really means the revival of the old anti-foreign policy of former years. It is no doubt well known abroad that the country is in great financial embarrassment, its paper currency is at a discount of nearly 50 per cent., and the Government are at their wits' end to know what to do to improve their financial position. The public are induced to believe that it has been the adverse balance of their foreign trade that has principally been the cause of the present financial depression, and the Government, as one step towards an improvement, are trying to turn the foreign trade into a Government monopoly if possible. In doing this they have an idea that they will be able to pay for exports in their irredeemable paper currency, and realise the same in foreign markets in hard cash. Of course, to carry out this policy they have yet to see whether their own merchants are so simple as to part with their goods for paper money instead of the hard cash they receive from foreign buyers. A national industrial exhibition was opened by the Government on March 1 last at Tokio. It has proved a most decided success; the total number of exhibitors is 31,000, and the number of visitors for the first month was 169,999. This exhibition is interesting to foreign merchants, as from it can be seen that in the near future Japan will require very little of such foreign manufactured goods as require little outlay of capital, expensive machinery, or cheap coal, as their labour is very cheap, and they show great aptitude in imitating nearly every possible article. There are no rights reserved to patentees under our present treaties, and the Japanese are not at all particular about appropriating every invention when it answers their purpose to do so. Even the Government at their factories are copying and making all kinds of machinery without any reference to proprietary rights in the matter. This is a subject that we are surprised parties interested in do not look after, particularly as the proposed new treaties are now under consideration. As an instance of the success of some newly-introduced industries, we may mention matches, of which there are now manufactories all over the country, one employing over 1,500 hands, and the goods are now exported in large quantities to China, Australia, &c. In the Hiogo prison 350,000 boxes are made daily. This industry has caused a large demand for the necessary chemicals, all of which are imported; and, in fact, an increasing trade is done in chemicals of all kinds used for manufacturing purposes, including soap-making, dyeing, scents, and many other purposes." Among special items of information, Messrs. Cocking & Co. report:—

"Bleaching powder has arrived in large quantities, and is at present unsaleable. We also understand the Government are about commencing its manufacture on a large scale. This will prevent any more business being done in the imported article. Benzoic acid, both from gum and urin, is inquired for, and the Japanese dealers are offering their indents for it. Carboic acid is in excessive supply and unsaleable at our quotations, and likely to be unless we are unfortunate enough to have another outbreak of cholera, which is not very probable. Tannic acid has been sold at \$1.25 per lb., in 1-lb. bottles, and is still inquired for. Chloroform is unsaleable. Mur. cinchonine has not been dealt in for some time. Our quotations are nominal. Bismuth has not been sold to any extent; the inferior quality that has been shipped here by some houses in London has deterred importers from operating, as the risk of condemnation by the Government laboratory entails heavy loss to importers. Morphia has been sold to considerable extent, we having disposed of over 1,000 oz. during the month at \$2.95 to \$3.00 per oz. Quinine has for a long time been totally neglected, and although the dealers are offering better prices, still holders cannot afford to accept same; importers are asking \$3.50 to \$3.60 for Pelletier's, but sales cannot be effected at over our quotations. Santonine we have sold about 8,000 oz. at 40c., but another holder commenced realising at 39c., and thus stopped business, as the dealers are now waiting expecting to obtain it at 38c.; the stocks on hand amount to about 45,000 oz., as against 60,000 oz. at the beginning of the year. The imports of this article for the first six months of last year were 86,045 oz. We hardly expect to see much improvement in prices until imports are considerably reduced. Iodine is in good request, and small parcels can be sold at our quotations. On the other hand, iodide potassium is totally neglected; imports have been heavy, and it would be difficult to effect sales at \$2.40 per lb. We have heard of no sales for some time, the dealers being well supplied by their indents which have arrived, and those Japanese who made contracts at \$3.25 are now trying to get out of them, as is usual with them under such circumstances; several cases have come into the native Courts to compel them to fulfil their bargains. Bromide potassium has improved, and sales have been made at 50c.; imports were about 20,000 lbs. for last year, and there remain about 6,000 to 8,000 lbs. on hand. *Drugs.*—Balsam copaiba is scarce and wanted in 1-lb. bottles; we have effected sales at \$1.00, and in bulk at 85c. per lb. Cascarilla bark is in small demand at very low prices that will not pay. Ergot of rye has been sold at 62½c. per lb., and further sales could be made if we had it. Glycerine has been neglected for a long time; during last year 1,000 cases were imported, which was more than the market wanted, but, fortunately, the increase in price of this article lately in Europe has enabled holders to re-ship their stocks with advantage. Gentian root, jalap, and ipecacuanha are in demand at unprofitable prices to importers. Colombo has receded in value, and our last sale was made at \$22.00 per picul. Wormseeds are saleable at \$15.00 per picul, at which price we have cleared out our stocks."

Obituary.

ELIAS.—Mr. John Roose Elias, chemist and druggist, died at Pentraeth, Anglesey, on January 19. Aged 61 years.

HICKLEY.—Mr. Thomas Potterton Hickley, pharmaceutical chemist, died at Edgware Road, London, on May 5. Aged 55 years.

OMBLER.—Mr. Edmond Henry Ombler, chemist and druggist, died at New Southgate on May 10. Aged 43 years.

PHILPOT.—Mr. Henry Philpot, pharmaceutical chemist, died at Praed Street, London, on May 21. Aged 67 years.

TANGNEY.—Mr. Thomas Francis Tangney, chemist and druggist, died at Canterbury on April 20. Aged 45 years.

WATKINS.—Mr. George Watkins, chemist and druggist, formerly in business in High Street, Walsall, died suddenly at the house of his sister, Mrs. Cowley, Mountrath Street, Walsall, on May 30. Aged 70 years.

WOODCOCK.—Mr. Thomas Woodcock, chemist and druggist, died at Bury on April 8. Aged 68 years.

Trade Notes.

MR. STEDMAN has issued a second edition of 100,000 copies of his pamphlet entitled "The Nursery Doctor," which he supplies to chemists for counter distribution.

MESSRS. W. GILBERT & J. CULVER, homœopathic chemists, of Bournemouth and Croydon, have dissolved partnership by mutual consent. Mr. W. Gilbert continues at Bournemouth, Mr. J. Culver at Croydon.

MESSRS. BRATBY & HINCHLIFFE, of Manchester, have sent us their monthly circular containing a long list of second-hand soda-water machinery and accessories. Likely to be useful reading to those engaged in the trade or thinking of entering it.

SINCE June 1 postage and receipt stamps may be employed reciprocally. Receipt stamps with printed letters on them, however, may not be used for letters. It is understood that when the present stock of receipt stamps is exhausted no new ones will be issued.

MR. F. BIRD, of Coventry, who has made ginger, lemon, and raspberry beer powders for some years past, brings out this year a "Champagne Fruit Powder," capable of yielding, after brewing, a sparkling beverage at a cost of about 1d. for a quart champagne bottle full.

THE AYLESBURY DAIRY COMPANY are now supplying koumiss in syphons at a low price, whey, peptonised milk, and an artificial human milk. They have an excellent milk laboratory at their Bayswater establishment under the direction of Dr. Vieth, and it is likely that they will largely develop the trade in these medicinal milk preparations.

WE HAVE RECEIVED a new list of surgical appliances, bandages, and druggists' sundries (illustrated), from Mr. J. S. Haywood, of Nottingham. Mr. Haywood has recently introduced a new spinal column support, especially serviceable to people who have to stand for long periods. It supports the back, and if worn as a corset causes no pressure on the chest, nor interferes in any way with the action of the lungs. It is illustrated in Mr. Haywood's advertisement.

POST-OFFICE REFORMS.—It is understood that a Bill will be introduced enabling the Post Office to begin next year with a sixpenny tariff for telegrams. It is also hoped to commence the system of delivering parcels by post next October. A stamp at the minimum rate of 6d. is to be issued, and parcels up to 4 lbs. weight are to be accepted, the Post Office and the railways to share the amounts paid.

MESSRS. W. J. BUSH & Co., of Artillery Lane, Bishops-gate, ask us to state that the first-class award granted to them for their exhibits at the Melbourne Exhibition was for essential oils and fruit essences, and not for oils and paints, as stated in our preliminary list last month. We may state that in the official list of awards received by us from Melbourne the name of Messrs. W. J. Bush & Co. appears in the First Order of Merit under the section "Paints, Colours, and Varnishes" for their "collective exhibit."

THE LIEBIG'S EXTRACT OF MEAT COMPANY, in their fifteenth annual report, presented to the general meeting of shareholders on June 7, report sales during the year amounting to 141,137l. 18s. 10d. This comprises sales of extract of meat, hides, tallow, horns, &c. The net profit amounts to nearly 70,000l., which allows for the usual 10 per cent. dividend and 15,000l. to be carried to the reserve fund. The company own about 37,000 head of cattle, and they have lately purchased about 27,000 acres more of grazing land in Uruguay for 18,419l., and have taken on lease 52,149 acres more land, so as to be able to increase their cattle stocks.

THE CHEQUE BANK'S report for the year indicates a profit for the first time. During the five years that the present company has been in existence the loss on the working has gradually been reduced from 3,875% in 1877 to 3,345% in 1878, to 1,932% in 1879, and to 389% in 1880. This year, by an increase of business and a decrease of expenses, a profit of 1,143% has resulted from the working. The number of cheques sold has nearly doubled since 1877, having reached this year 454,169, of the value of 1,114,423%. The directors have not found their business appreciably injured by the postal notes issued by the Government, but they complain that the Post Office has adopted a system which has been inaugurated by private enterprise and with much labour and outlay of capital, and they argue that their cheques for sums under 17. should be like the postal notes, free of stamp duty.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, 4 South Street, Finsbury, London, and at Paris and Brussels.]

Letters Patent have been issued for the following :—

Alkalics.—No. 4985.—T. Morgan.—A communication from N. Glonchoff, of Paris. Improvements in the manufacture of soda and other alkalies by the process of electrolysis. Dated November 30, 1880.

Beverage.—No. 4638.—E. W. Allen, of Peckham, London. An improved nitrogenous compound gaseous flavoured beverage. Dated November 11, 1880.

Beverage.—No. 4781.—J. McWilliam.—A communication from A. W. Armstrong, of New York, United States. The production of a new alimentary material from which a beverage may be made. Dated November 19, 1880.

Bottling Aerated Liquids.—No. 5063.—F. Foster and S. Barnet, both of Forston Street, Hoxton, London. Improvements in apparatus for bottling aerated liquids. Dated December 4, 1880.

Castrating Horses.—No. 5349.—J. Scott, of Dennistown, North Britain.—Partly a communication from G. L. Matthew, of New York, United States. Improvements in castrating horses, and in the instruments or means employed therefor. Dated December 21, 1880.

Catching Insects.—No. 5111.—A. Nash, of Canterbury. A new or improved means for catching beetles, cockroaches, and other insects. Dated December 8, 1880.

Cleaning Bottles.—No. 876.—W. R. Lake.—A communication from J. M. Hoyt, of Lynn, Massachusetts, United States. Improvements in machines for cleaning bottles. Dated March 1, 1881.

Closing Jars, &c.—No. 4927.—H. Doulton, of High Street, Lambeth, London. Improvements in the means for closing stoneware jars and other articles requiring to be similarly closed. Dated November 26, 1880.

Colouring Matters.—Nos. 938 and 939.—C. D. Abel.—A communication from Messrs. Bindschedler & Busch, of Basle, Switzerland. Improvements in the production of colouring matters. Dated March 4, 1881.

Colouring Matters.—No. 4846.—O. N. Witt, of Milhausen, Alsace, Germany. The production of new colouring matters suitable for dyeing and calico-printing. Dated November 22, 1880.

Colouring Matters.—No. 4966.—F. Wirth.—A communication from E. Ochler, of Offenbach-on-the-Main, Germany. Improvements in the manufacture of colouring matter. Dated November 29, 1880.

Corks.—No. 704.—F. Des Voeux.—A communication from E. Gaston, of Castres, France. Improvements in or relating to machinery or apparatus for the manufacture of corks for bottles, jars, and the like purposes. Dated February 18, 1881.

Disinfecting or Purifying Alcohol.—No. 4541.—W. A. Barlow.—A communication from L. Naudin and J. Schneider, both of Paris. Improvements in or applicable to the disinfection or purification of alcohol of bad taste or tainted quality. Dated November 5, 1881.

Heating or Cooling the Human Body, &c.—No. 5312.—W. P. Thompson.—A communication from J. Leiter, of Vienna. Improvements in and relating to apparatus for heating or cooling portions of the human or animal body for medical or surgical purposes, applicable partly also for sprinkling. Dated December 18, 1880.

Filtering Water.—No. 4861.—C. G. Pfander, of St. Andrew's Hill, Queen Victoria Street, London. Improvements in apparatus for filtering water for domestic use. Dated November 23, 1880.

Magnesia.—No. 298.—C. Scheibler, of Berlin. Improvements in the manufacture of magnesia. Dated January 22, 1881.

Opening Bottles.—No. 1152.—H. Codd, of King William Street, London. Improvements in instruments for opening internally stoppered bottles. Dated March 16, 1881.

Oxidising or "Aging" Liquors.—No. 4519.—W. R. Lake.—A communication from C. W. Ramsay, of Brooklyn, New York, United States. An improved process for oxidising or "aging" distilled and fermented liquors. Dated November 4, 1880.

Preserving Liquids.—No. 4494.—W. R. Lake.—A communication from C. W. Ramsay, of Brooklyn, New York, United States. An improved mode of treating fermented and fermentable liquids for the preservation of the same. Dated November 3, 1880.

Preserving Food.—No. 5332.—J. Eckart, of München, Bavaria. Improvements in processes and compositions for preserving meat and other articles of food. Dated December 20, 1880.

Purifying Alkaline Solutions.—No. 1161.—D. Carey, H. Gaskell, jun., and F. Hurter, all of Widnes, Lancashire. Improvements in the purification of alkaline solutions. Dated March 17, 1881.

Rectifying Alcohol, &c.—No. 5245.—S. Pitt.—A communication from the Compagnie Industrielle des Procédés Raoul Pictet, of Paris. Improvements in the rectification of alcohol, and in the methodical separation of mixed liquids, and in apparatus to be employed therein. Dated December 14, 1880.



BANKRUPTCIES.

BROOKES, OWEN, 2 St. John's Buildings, Mostyn Street, Llandudno, chemist and druggist. May 27.

LOMAS, JOHN, Antron House, Upper Tulse Hill, and 7 Fenchurch Street, and the Wepre Chemical Works, Wepre, and the Canal Side Chemical Works, Canal Side, Chester, chemical manufacturer. May 19.

LIQUIDATIONS.

BISHOP, JAMES, 112 High Street, Southampton, chemist and druggist. May 4.

BOWEN, HENRY, Temple Terrace, Morriston, late Union Chemical Works, Morriston, chemical manufacturer. May 28.

ECCLES, WILLIAM CROSS, and **ECCLES, JOSEPH SNAPE**, Ditton Road, Widnes, under firm of Eccles Bros. & Co., alkali manufacturers. May 16.

ESCREET, JAMES, Beaumont Street, Hull, drysalter, chemist and druggist, and manufacturing confectioner. May 30.

FERRIS, JOHN ANDREW, 26 Buckingham Palace Road, Pimlico, and 1A Victoria Square, under firm of Ferris & Co., surgeon, chemist, and druggist. May 14.

HARRISON, ERNEST, 24 Old Chester Road, Tranmere, chemist and druggist. May 30.

HARTLEY, JOHN, 6 Billiter Street, commission agent, formerly drug importer, Yokohama, Japan. June 8.

LAURENS, FREDERICK LEMPRERE, 19 Church Street, Monkwearmouth, chemist and druggist. June 8.

MASTON, GEORGE, High Street, Hartlepool, chemist and druggist. May 20.

WALTON, JOHN, 7 Winterbottom Street, South Shields, chemical engineer. May 24.

WATSON, HENRY WILLIAM, jun., Livingstone Road, Sunderland, wholesale druggist, grocer, and tea merchant. May 5.

BANKRUPTCY ANNULLED.

COOPER, JAMES CUTHBERT (made February 24, 1881), 2 Queen Street, Newcastle, chemical merchant, under firm of Cooper Brothers & Co.

PARTNERSHIPS DISSOLVED.

GATES & LITTLEPAGE, Victoria Steam-mills, Fairclough Street, Back Church Lane, Commercial Road, E., drug, grist, and spice grinders. April 30. (Robert Henry Gates and Charles Littlepage.)

GILBERT & Co., Branksome Houses, Commercial Road, Bournemouth, homoeopathic chemists. March 26. (William Gilbert and John Culver.) Debts by Gilbert, at Bournemouth; at Croydon, by Culver.

OLDROYD, THOMAS, & SONS, Huuslet, Leeds, manufacturing chemists. January 5. (James Oldroyd and Christopher Oldroyd.) Debts by C. Oldroyd.

LEAROYD, EDWARD RADLEY, & WATSON, ROBINSON HENRY, London Road, Sheffield, chemists and druggists. May 16. Debts by Learoyd.

Exchange Column.

ADVERTISERS IN THE EXCHANGE COLUMN will find it very much to their advantage to draw up their announcements so that they will fall naturally into one of the divisions into which the advertisements are grouped.

We would also suggest that those who avail themselves of the Disposal section will be wise to define, with some approach to detail, what they have to sell. Probable purchasers are too busy, in most cases, to enter into preliminary correspondence, which is likely enough to have no ultimate result.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C." the envelope to be endorsed also with the number. The Publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

Deposit of Money.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us. We shall acknowledge receipt to both parties by post-cards, and shall only pay it away on the advice of the remitter. Whether returned to him or paid to the seller, we shall charge a commission of 2½ per cent. on any money thus passing through our hands, and not less than 6d. on any single transaction. This arrangement should entirely prevent any cause of complaint or dissatisfaction arising out of this section of THE CHEMIST AND DRUGGIST.

FOR DISPOSAL.

Drugs and Chemicals.

About 1 cwt. sem. fenugrec., good condition, price 12s. cwt. Kemp, Chemist, Horncastle.
Ol. lavand., Aug. 1871, guaranteed genuine, 40 oz., at 8s. 6d. per oz., sample sent for 1s. G. E., 416 Stockport Road, Manchester.

Quantity ess. limonis, extra super, the finest imported, send for sample and price. Bates, Oxford Street, Southampton.

Ol. menth. pip., Aug., Mitcham, 1½ lb.; ol. menth. pip., Aug., Mitcham, alb., ¾ lb.; ol. lavan. opt., Mitcham, 10 oz. Mr. Chambers, Lowden Road, Herne Hill.

A quantity of surplus stock of drugs, drysaltary, and chemicals to be sold cheap, as I want to reduce the stock previous to disposal of the business. Send for list to R. Sowerby, Middlesbrough.

Apparatus.

Tin percolator, 1 gallon, with receiver, good order, price 10s. Kemp, Chemist, Horncastle.

Handsome shower-bath, almost new, with force-pump, &c., complete. Apply, Wm. Marston, Stafford.

Cartner's pill-coater, nearly new, cost 25s., price 12s., or exchange saleable drugs. J. Thompson, 54 Stanhope Street, Liverpool.

Soda-water machine, No. 1 Hayward Tyler's, large gasometer and generator to correspond, with piping, &c., good as new. Apply, "H. B.," care of Watson Joll, Horncastle.

60 feet garden-hose, ½ inch inside, brass tap, rose and jet complete; quite new and best make, 25s.; cost 40s. 445 Coventry Road, Birmingham.

Ether inhaler, by Weiss, London, in leather-covered case, lined with crimson velvet equal to new; full instructions for use; price 20s., worth above double. Parker, 360 Leeds Road, Bradford.

Cheap Pulvermacher's galvanic apparatus, equal to new, complete with battery, suspenders, drawers, day-chains, night-chains, &c., retail price 15l. 15s. What offers? Address, Manager, Fox & Co., 3 Market Place, Harrow Green, Leytonstone.

Optical.

A lot of Herbert & Godfrey's spectacles, invoice price 12l. cash; offers wanted; will sell almost any price. 35/9.

Willoug's electric show-board in case, "Crystal and Pebble Spectacles," great attraction for widow, to be sold cheap or exchange. H. Hylton Taylor, Middlesbrough.

Proprietary Articles.

Over one gross clean saleable patents; send post-card for particulars. Craveu, Batley Carr.
Four 1-gallon tins Calvert's carbolic sheep-dipping; what offers? 100 lbs. of Colman's indigo blue, in one or two lots; what offers, in cash or goods? 39/11.

Cash or Exchange.—Offers for quantity 1s. hoxes plate powder, sells wholesale at 7s. per dozen; sample box, 10d. free. D. Richards, 71 Great Charles Street, Birmingham.

Epp's mahogany homeopathic show-case, containing 80 one shilling and 85 sixpenny tincture and pills. What offers? Cash or exchange. Holloway's, Rooke's, Cockle's, Clarke's blood mixture; Dr. King's Siegel's syrup. B., 11 Bridge Street, Goole.

4½ lbs. pulv. asafetida, strained; 12 Longfield's pig powders, 1s.; 12 each Smith's pig powders, 6d., 1s., and 1s. 6d., 11s.; Astley Cooper's restorative, 1½ doz.; Morris' herb cigarettes, 2s. each; Marriott's vermin-killer, 3d., 6d., and 1s.; Smith's tic, tooth-ache, and rheumatic mixture, a good, reliable medicine, 13½d.; patent medicines taken for above. Henry Smith, Chemist, Batley, Yorkshire.

Seventeen doz. Thompson's Cheltenham salts; 10 doz. (Buck's) essence sherry; 20 doz. (Buck's) essence rum; 4 doz. H. A. Thompson's suc digitalis; 3 doz. Robbins's styptic colloid; 4 doz. Grimaud's elixir pepsine; 2 doz. Grimaud's syrup horse-radish; 16 gross Battle's vermin killer; 18 doz. Drew's cod liver oil and quinine; 24 doz. 2s. 9d. Atkinson & Barker's infant preservative; 12 doz. Mothe's capsules; 12 doz. Ford's balsam horehound; will be sold cheap; what cash offers? must be sold. 188/53.

Educational.

Fine binocular microscope, with first-class English objectives and other apparatus, cost over 30l., price 18l. 10s. "Chemicus," 187 Hoxton Street, London, N.

Set of illegible autograph prescriptions (original) 2s. 6d.; 30 prescriptions (catch and difficult) given to dispense at Minor during past 12 months, 2s.; 50 questions asked of my successful students at last Minor, 1s. 1d.; lot of cheap, almost new, books, stamp for list. Saunders, Medical Tutor, 79 Galsford Street, N.W.

Literature.

Chemist and Druggist for 1880, 4s. Miller, Chemist, Wednesfield.

The Chemist and Druggist for 1877, 1878, 1879, 1880. What offers? Jas. Adams, Chemist, Brixton Hill, Surrey.

Evans' "Cabinet Materia Medica," 108 specimens, good as new. Humphries, Garston, Liverpool.

Muspratt's "Chemistry," two vols., half calf, illustrated, good condition, price 30s. Kemp, Chemist, Horncastle.

To Manufacturers and Others.—A recently and carefully compiled MS. register, comprising a list of 5,000 of the best hotels in England, Scotland, and Ireland; cheap. 4/186.

The Chemist and Druggist, from the beginning in 1859 to the end of 1880, two parts of 1874 wanting, thirteen years bound, rest unbound, 1l.; Pharmaceutical Journal, eleven volumes bound, and several unbound, the lot 10s. 6d. Kemp, 242 Stretford Road, Manchester.

Attfield's "Chemistry," 6th edition, 8s. 6d.; Garrod's "Materia Medica," 3rd edition, 6s.; Squire's "Companion," 8th edition, 4s.; Tanner's "Practice of Medicine," 7th edition, 21s.; Pharmaceutical Journal from 1868; Chemist and Druggist from 1875. What offers? Jones, Pharmacist, Treherbert.

"Chemistry Applied to Arts and Manufactures," vol., 4s.; Muter's "Pharmaceutical Chemistry," 6s.; Galloway's "Advanced Chemistry," 6s.; Johnson's "Chemistry of Common Life," 6s.; "Notes on Metals," Thomas Wood, F.C.S., 2s. 6d.; Slater's "Handbook of Chemical Analysis," 2s. 6d.; "Elements of Heat and Non-metallic Chemistry," Guthrie, 3s. 6d.; Taylor "On Poisons," 4s. 6d.; Phillips' "Metallurgy," 7s.; Percy's "Metallurgy," 8s.; "Coal and Coal-mining," Warrington Smyth, 4s.; Gesner's "Coal, Petroleum, and Distilled Oils," 3s.; Procter's "Pharmacy," 7s. 6d.; "Borderland of Science," Procter, 5s. C. Nicholson, Chemist, Bootham, York.

Carpenter's "Physiology," 7th (31s. 6d.), 14s.; Miller's "Chemical Physics and Organic Chemistry" (31s. 6d.), 12s. 6d.; Loudon's "Catalogue of all Plants Cultivated in Britain" (31s. 6d.), 10s. 6d.; Bloxam's "Chemistry," 1876 (16s.), 8s.; Blyth's "Dictionary Hygiene," last edition (23s.), 14s.; Todd's "Clinical Lectures by Beale," three series (18s.), 7s. 6d. The following post free:—Johuston's "Agricultural Chemistry" (6s. 6d.), 3s.; Duister's "Collector's Handbook Botany," new, 2s. 6d.; Jones' "Diseases Women," coloured plates (8s.), 4s. 6d.; Nasmyth's "On Teeth," fine plates (21s.), 6s.; Merriman's "Parturition," plates (12s.), 4s. 6d.; Quincey's "Dispensary," 4s.; Prof. Buff's "Familiar Physics" (5s.), 2s. 6d.; Horsley's "Poisons," 2s. 6d.; Andral's "Pathological Anatomy," 2 vols. (26s. 6d.), 6s. M. Percy, 11 James Street Haymarket, S.W.

Shop Fittings.

Offer wanted for eight 2-gallon pear-shaped carboys. Hammond, Chemist, Hull.

Eighteen stoneware harrels, round, labelled with Royal arms, bung and tap holes. Kendall, Chemist, York.

Twenty 32-oz. shop rounds N.M., chemical apparatus, retorts, flasks, basins, &c., cheap. Hardy, Chemist, Tandragee, Ireland.

The entire fittings of six handsome chemists' shops, price 37l., 45l., 56l., 70l., 75l., 115l. Lloyd Rayner, 333 Kingsland Road, London, N.

Offers wanted for one of Leath & Ross's 4-guinea cases; one of Butcher's 3-guinea cases; and a quantity of homeopathic medicines—Epps's, Leath & Ross's, and Butcher's—in good condition. Mellor, Chemist, St. Neots.

Bargain.—The entire fittings of chemist shop, including 108 drawers and three cupboards, glass knobs, and gold labels, mahogany-topped counter, window fittings, with ornamental glass, glass cases; only used nine months. Apply, B., 11 Bridge Street, Goolc, Yorks.

For sale, cheap.—Two 6-ft. nests of mahogany-fronted drug drawers, with glass knobs, each containing 30 drawers; also, two 4-ft. nests and one 2-ft. nest, at 2s. per drawer, without labels; counters, shelving-cases, &c., all first-class make. Apply, H. Clark, 8 Mare Street, Hackney.

To Chemists commencing Business, and Others. The entire fittings of a chemist's shop, about 500 various bottles and contents, labelled; 2 large handsome window bottles; mahogany nests of drawers; shelving, with plate-glass backs; desks, &c. Apply to Reading & Son, House Agents, 26 Chisworth Street, Westbourne Terrace, W., who will show same. Offers for the whole or any of the fittings, drugs, &c., to be addressed to Robert Lathbury Park House, Chiswick.

Wall-case, mahogany, 5 feet long, 8 feet 6 high, 95s.; wall-case, pine painted, 9 feet long, 8½ feet high, 120s.; 6-foot dispensing-screen, mirror centre, each side, 110s.; 7 feet long, 12½s.; desk and case, Maw's, 42s. 6d.; ease to go before desk, good as new, 30s.; fixtures of a shop, 13 feet square, only in a week, 247.; bent-front case, 5 feet long by 12 inches broad, 57s. 6d.; ditto, 7 feet long, 84s.; 10 20-inch specie jars, nicely labelled, 25s. each; 48 1-gallon bottles, new labels, 1s. 10d. each; large assortment of counter-cases, from 5s. each; mahogany-top counter and return counter, 15 feet, in all 90s.; 7 or 8 lots of window-fittings, new fittings, ready for every size of shop. Write for lists. R. Tomlinson, Shop Fitter, 15 St. Paul's Square, Birmingham.

Plate-glass counter-cases, equal to new, as fig. 105; two 5 ft. 8 in. long, each 67. 10s.; one ditto ditto, 5 ft. long, 67. 10s.; one ditto ditto, 6 ft. long, 77.; one ditto ditto, 8 ft. long, 87. 10s.; 3 ft., as fig. 16, 40s.; 4 ft. long, 50s.; as fig. 100, 3 ft. long, 60s.; 3 ft. 6 in. long, 70s.; 4 ft., as fig. 101, 85s.; as fig. 99, one 5 ft. 8 in. long, 77.; bent plate-glass tooth-brush case, 30s.; ditto ditto, fig. 52, 30s.; a 6 ft. 4 in. bent plate-glass counter-case, to open in front, 77.; several plate-glass wall-cases, from 4 ft. long, very cheap; an upright glass case, 6 ft. long, 30 in. high, with bent-glass end, 57.; soda-water stand, fig. 63, 50s.; several nests second-hand drawers. E. Natali, 207 Old Street, Shoreditch, London.

Plate-glass sponge case, fig. 90, 65s.; do. do, fig. 92, 57.; desk and glass case, fig. 21, 65s.; a 4-ft. 6-in. dispensing-screen, with tablet on top, plate-glass doors, and polished mahogany, 90s.; a 5-ft. do. do., fig. 161, 57. 10s.; 6 ft. do. do., do., fig. 164, 67.; 8-ft. do. do., with silvered-glass back, fig. 165, 87. 10s.; 3 very elaborate dispensing-screens, 5-ft. long, 6 ft. long, and 7-ft. long, fitted with a plate-glass case at each side, with silvered plate-glass centre, with marble slab in front, surmounted by tablets, &c., "Dispensing" "Department" fitted inside cases, with silvered-glass backs and shifting shelves, also fitted at back with three shelves for dispensing bottles, each 87. 10s.; 20 very elaborate specie jars, royal arms, &c., 80s. pair; 100 opaque jars, elaborately labelled, glass gold covers, fig. D, equal to new, 8s. each, worth 12s. E. Natali, 207 Old Street.

2 ft. long, 4 ft. long, 6 ft. long, 7 ft. long, 8 ft. long, 10 ft., and 12 ft. long, mahogany-fronted, dovetailed drawers, glass knobs, and bevelled edge glass labels, 2s. 9d. per drawer; if with gold labels, 2s. 6d.; if with mahogany knobs, 2s. 3d. (some nests have two rows of small and two rows large drawers, and others three rows small and two rows large drawers); a number of mahogany cupboards, from 3 ft. long to 9 ft. long; deal, painted, lockers, from 4 ft. to 16 ft. long; mahogany-fronted shelving, any length; mahogany cornice, pilasters, and uprights for shelving; 50 mahogany-top counters; a mahogany-fronted counter, with circular end, a bargain; a splendid mahogany and plate-glass wall-case, as fig. 210, equal to new, 287.; a bargain; a 7 ft. wall-case, fig. 200, 147.; a number of wall-cases, from 3 ft. 6 in. to 12 ft. long, very cheap. All numbers refer to Maw's list. Sketches, with description, free. E. Natali, 207 Old Street, Shoreditch. *Numbers quoted refer to M. srs. Maw, Son & Co.'s Illustrated List.*

20 nests superior mahogany deal dovetailed shop drawers with glass labels, &c., in all lengths; 8 nests deal stained mahogany-fronted gold-labelled shop drawers; 15 mahogany wall-cases with and without cupboards under, all sizes; 5 mahogany window enclosures; 18 mahogany-top counters, all sizes; 8 mahogany upright counter cases with and without desks; 2 soda-water stands, as 63 Maw's; 2 handsome show stands, as 19 and 54 Maw's; sponge cases, as 90 and 92 Maw's; 6 ft. and 7 ft. long handsome dispensing screens, with a mirror centre and a case at each end; 10 handsome dispensing-ease screens, as fig. 40, 163, 164, 165 Maw's; tooth-brush cases, as 52 and 72 Maw's; 3 outside shop lamps; pill machines; mixing mill; tincture and cork presses; quantity pear-shape window carboys, all sizes; quantity specie jars with royal arms, &c.; quantity gold-labelled shop bottles and jars, and every description of fittings and utensils required by the trade. Lloyd Rayner, 333 Kingsland Road, London, N.

A range of second-hand mahogany-fronted drug drawers and labels, 6 feet 9 long and 9 feet 5 long, and 2 feet 4½ high, containing 113 drawers, cover-board, and deal lockers under, 67. 10s.; ebonyised second-hand counter-case, silvered-glass back, circular-plate glass top to lift up, 3 feet 9 by 1 foot 3, 27. 5s.; Spanish mahogany dispensing-screen, 8 feet 11 long, 1 foot 11½ high, 2 patent plate-glass sashes and tablets over ditto, 3 pilasters and trusses, shelves behind, own make, used for a few years, 77. 10s.; mahogany wall counter-case, 3 circular plate-glass flaps to open solid ends, deal back, 6 feet 1½ long, 1 foot 9 deep, 1 foot 7½ high, own make, used a few months, 77. 10s.; new plate-glass fascia, embossed French letters, black ground, "Pharmaceutical Chemist," 12 feet 2½ long, 1 foot 2 high, 37. 15s.; 37 6-quart black upright store bottles, caps and bungs, 27.; 2 handsome mahogany window-pillars for carboys, bases, carved cap, and fluted columns, 4 feet 1½ high, 77. Apply to W. Hawke & Son, Wild Court, Great Wild Street, London, W.C.

Formulae.

Genuine foaming dentifrice (equals "Sodont") 3s. 6d. 37/28.

The recipe for a first-class perfume, "The Devonshire Nosegay," or "Gem of the Toilette," price 3s. 6d. "Chemist," 29 Dean Street, Westminster, Bristol.

The recipe for making insect-powder, equal to Dalmatian in colour, smell, and efficacy, at the cost of 10d. per lb.; 2s. 6d. "Chemist," Mrs. Turnbull, 7 The Crescent, Carlisle.

Hop beer, superior summer drink, Chinese glaze for starch, 2s. each; cure for rheumatism, guaranteed, 5s.; ginger beer powders, 3d. packet makes two gallons; composition powder, as used by herbalist, 1s. J. C. Akester, 79 Hesse Road, Hull.

Spt. ammon. aromat., without distillation, answers B.P. tests, splendid aroma, used for dispensing, 5s.; true American cock-tail bitters, costs 2s. pint, genuine recipe, much appreciated, 5s. E. A. H., 136 Dyer Street, Cirencester.

Formula for the prize perfume, which lately obtained the premium award, "having over 170 competitors offered," for 2s. 6d., and will not be for sale after present month's issue of *C. & D.* Address, "Obemist," 11 Hopefield Terrace, New Wandsworth, S.W.

Thirty well-tried genuine recipes, including ague drops, asthmatic pastilles, aromatic vinegar, brilliantine brass paste, chilblain remedy, cough mixtures and pills, crimson ink, Dalby's earminative, glycerine jelly, liquid cochineal, milk roses, toilet ointment, starch gloss, sponge cleaner, toilet vinegar, &c., neatly copied with full directions for making doses, &c., post free 2s. 6d. T. Langtry, 1 Christchurch Street, Hull. List free.

"Bark Syrup," "Fruit Syrup with Phosphates," mixed 1 oz. to bottle aerated water, form delicious beverages, former resembling rubric, latter zoedone, at ½ lb cost; "Campholyte," guaranteed specific for neuralgia, always relieves; "Digestive Morse's (Peptonised)," new preparation for indigestion, give instantaneous ease, 10d. gross; "Lavender Water" (West-end formula), really good, equal to Sainsbury's; Red-rose Lotion" (recipe of Erasmus Wilson), removes pimples tan, freckles, &c., elegant appearance, resembles Sulpholine; "Lime-cream and Glycerine," snow-white chemical combination, inseparable, 2s. 6d. gallon; "Amygdoline Balm," milky emulsion, softens the skin, simple and elegant; "Entirely New Remedy for Toothache," instant relief, never fails nor injures teeth; "Effervescent Depurative Saline," equal in every respect to Eno's. Recipes, with full directions for making (all inexpensive), 1s. 1d. each, three for 2s. 6d., free, detailed list one stamp. Brooks, Chemist, Louth, Lines.

Fragrant foaming dentifrice (like "Floriline"); marking ink, *sine* silver (aniline), writing executed defies chemicals; effervescing fruit saline (resembles Eno's); magic neuralgic drops (never-failing remedy); quinine and iron tonic (resembles Pepper's); lime-juice and glycerine (inseparable, white as milk); blue-black ink (non-corrosive, *sine* iron or galls); cherry tooth paste (never ferments, like Gornel's); brilliantine (inseparable, like Rimmel's); pill-coating, (pearly white, no mucilage or mastic used); glycerine jelly (perfectly transparent); crimson marking-ink; hair-restorer (colourless, no deposit, *sine* silver); aromatic vinegar; toilet vinegar (as Rimmel's); plate-powder, (like Stevens' "Silicon"); Oleum Flavam Conc., for pomades (colour stable); soluble essence ginger (like Hay's); corn solvent, clear (not acid); liquor copaita comp. c. buchu et matico (mixes clear with water); gonorrhoea paste, excellent (Dr. Ricord's); with many others; send stamp for list, stating wants. Chemical analyses for the trade. The toilet preparations are identical with those prepared by a wholesale West-end firm; and others equally good; all inexpensive to make; 5s. each (five for 17.). Readers are cautioned against cheap and worthless imitations. I was first to advertize formulae in this journal. Note address, "Analyst," care of Mr. Warnes, 79 Gaisford Street, N.W.

Miscellaneous.

Twenty-four 1s. medicue stamps, 9d. each. 39/10.

Cask 5 cwt. lard, suitable for sheep ointment, sweet and good colour; having no use for it will sell at 35s.; cask free, net cash. G. C. B., 23 Bunhill Row, London, E.C.

Platc.—20 dozen Sheffield silver-plated table and dessert spoons and forks, very massive, been out on hire, 9s. dozen; sample, 15 stamps. Address, Mr. W., The Lion, 44 Arcade, Birmingham.

Gladstone expanding bag, real enamel cow-hide, with outer and inside straps, complete, full size, quite new, and best make, 25s., cost 42s. Address, G., 331 Lodge Road, Birmingham.

Six No. 2, four No. 3, six No. 4, one No. 5, Florentine electric hair-brushes; also 34 Bell's (Liverpool) unfermented wine, large size; 18 ditto small size; what cash offers? 36,9.

Six dozen spectacles, assorted sights, cost 12l.; two enemas, fig. 5 Maw's, cost 3s.; one ditto, 7s.; one ditto, fig. 6; brass breast-pump, Maw's fig. 4; three Murray's magnesias, 2s. 6d. What offers? Ellis, Chemist, Southport.

Large mixing machine, paper and label case; counter-case, 6 feet long, cheap; two 40-gallon drums and taps; quantity 1d. violet-powder wrappers (gilt); vermin-killer, all sizes; oval boxes for $\frac{1}{2}$ l. kali, 6d. corn paint, cash or exchange. Wilks, Burnley.

A French card-printing machine, 100 a minute, cost 35l., good order, 6l.; Parnell's saline; Porter's nipple lotion; Hyburn's ginger beer powders; Fowler's insect powder; West's worm specific; Lowden's pills; will exchange goods. Cumbers, Plain, Waudsworth.

Twenty McDougall's carbohc acid drums, 3 to 5 gallons, all sound, price 1l. W. H. Willson, New Shoreham.

Pinder's 5-gr. piping press, 15s.; pill machines, 5-gr., iron and marble, 3 doz., 12s. 6d.; ditto, mahogany, 2 doz., 7s. 6d.; Squire's "Pharmacopoeia," 6th edition, worn, 2s.; Maw's powder folder, 1s. Campkin, Chemist, Cambridge.

Compound microscope, six powers, and quantity of object glasses, mounted with specimens in mahogany case, complete, 35s.; light two-wheel hand delivery cart, covered, lock-up, green and black, 3 guineas, cost 6; capital mill, heavy fly-wheel, suitable for grinding coffee, pepper, seeds, 20s.; drying closet for lozenges, powders, &c., with metal shelves and steam-pipes under each shelf, good condition, 14l.; good liver Barbados aloes, 13d. per lb.; suppository mould for six, scarificator, as fig. 3, never used, stump forceps (Tomes' pattern), as fig. 19, the lot 25s.; Kenny Meadows' Shakespeare, 7 vols., 20s. Moore, Chemist, Cheltenham.

WANTED.

One hundred shop rounds, assorted, 50s. 4l. 14.

A good microscope; give particulars. 39/21.

Copy of Chemists' and Druggists' Diary for 1881. State price. 38/19.

Two three-gallon swan-necked window carboys, cut stoppers. Forl, Chemist, Kirriemuir.

British Pharmacopoeia. Address, H. 9 Upper Talbot Street, Nottingham.

Surplus stock patents; send list with price; or exchange, soiled or clean. Fowler, Boston.

MaeQueen's Scotch oatmeal soap. Send sample and price Harvey, Margate.

A small gas-engine. Cavell, Chemist, Long Sutton, Lincolnshire.

To purchase secondhand statuette "You Dirty Boy." Price (lowest) and condition to Walter Stead, Westgate, Heckmondwike.

Wall-cases for chemist's shop, with full particulars to Potts, Ilkeston.

The *Commercial Compendium*, weekly, within one week of its publication. State price to Thos. Durant, King Square, Bristol.

Empty liquid gas bottle nitrous oxide, 50 or 100 gallon. Lowest cash price to J. Potts, 58 Tatham Street, Sunderland.

Eight or ten pair of tooth forceps. Give description and lowest price E. Johnson, 22 Whitefield, Heaton Norris, Stockport.

Show-case, similar to Maw's fig. 40. State condition and lowest price, also two 3-gall. show carboys. E. Johnson, 22 Whitefield, Heaton Norris, Stockport.

Howard's quinine, morphia, gum opium, iodine resub. pot. iodide, 10-lb. bottles; camphor, glycerine 1260, oil sandall, balsam copaiv. Mr. Chambers, Lowden Road, Herne Hill.

Machinery for making sheep-ointment, either new or second-hand; chemists or manufacturers are invited to apply. H. K., 17 High Street, Horncastle.

Cooley's "Practical Receipts." Piesse's "Art of Perfumery," Chemists and Druggists' Directory, latest editions. A., 57 Grovedale Road, Upper Holloway, London.

One or two specie jars, about 27 inches, with stands; wall-case, about 4 feet wide, 6 feet high; desk-case, similar to Maw's 21 or 39, about 24 inches wide, 28 high; shop-front lamp, complete, with bracket. Cheap, lowest price to Edkins, 64 Belsize Road, London, N.W.

Mr. P. A. Stevens (Woodberry Town) writes:—"The advertisement inserted in your Exchange Column last month has procured me the book I required at about half price."

Mr. J. Potts (Sunderland) writes:—"I beg to inform you I obtained what I required to my perfect satisfaction by advertising in last month's journal."



THE sunshine which characterised the May of 1881 above many of its predecessors seemed to restore the hopefulness of commercial and financial authorities. The prospects of a good harvest have a great effect in encouraging confidence, and up to the present they could hardly be better. The enormous flow of enterprise which this year has developed can hardly be regarded with unmixed satisfaction, but that proportion of it which is legitimate is clearly of extreme value in causing the circulation of money, and relieving the plethora of wealth, which is one of the curious afflictions of dull times. All evidence shows that the chief factor in the production of what is now known as bad business is not the absence of demand, but the immensely increased capacity of our manufacturers to produce. In almost every department of business may be traced larger transactions and much smaller profits. A glance through the Board of Trade returns of any month will prove this. To take "alkali" for an example, it appears, as the figures given below show, that while the exports in May, 1881, were 20 per cent. more in quantity than in May, 1880, they were not quite 3 per cent. better in value. A similar condition, though not to so marked an extent, prevails in the cotton, coal, jute, woollen, iron, and other trades. These facts, no doubt, indicate smaller profits to the very few, that is to the capitalists, but they suggest better wages and more employment to the operatives, lower prices to the consumers, and perhaps in some cases higher profits to the distributors.

The Board of Trade returns for May mark an increase of business. The imports for the month were 32,822,000l. in value, as compared with 30,453,000l. in May, 1881. The exports reached 19,087,648l., against 17,277,876l., making the

total for the first five months of the year 90,503,000l., or 1½ per cent. better than in the first five months of 1880, and 20 per cent. better than in the first five months of 1879. As we have said these are values and when the reduction therein is considered it is clear that the increased volume of trade is even greater than is thus shown. The exports of chemicals for the month stands thus:—

	May, 1880	May, 1881
Alkali	595,127 cwt.	714,532 cwt.
Other Chemicals ..	209,230l.	215,197l.
	185,955l.	224,042l.

The chemical market was depressed until the end of May, makers still competing for orders, and sending prices even lower than the level of last month. But with a good general demand many of the works are sufficiently occupied, and a decidedly stronger tone has supervened. For soda the quotations are about equal to those of a month ago, except for crystals, which have been in considerable demand for America, and have advanced to 66s. 6d. to 67s. 6d. Bleaching powder has sold at 5l. per ton in London, but is now firmer at five guineas. Chlorate and bichromate of potash are dull.

The market for saltpetre is very inactive, and quotations have further declined.

Mercurials are steady.

Citric acid has been firmer, and not less than 2s. 0½d. would be accepted a week ago, but it is now a shade easier, and transactions at 2s. are reported. Tartaric is firm, and for foreign less than 1s. 7½d. is refused.

ALOES.—Cape are scarce and bring extreme prices. Barbados are cheaper. Other kinds not much in demand, but prices steady.

CAMPHOR still arriving in large quantity, and if pressed on the market a further considerable reduction must ensue.

CAPSICUMS.—Of 497 bales and bags of Bombay and Madras offered for sale only about 40 bales found purchasers at a considerable reduction. Fine bright plump small

Madras made 55s. 6d., but the bulk bright long red to dull polish realised 23s. down to 15s. 6d. One bale of fine bright bold red Natal sold at 71s.

CARDAMOMS are in abundant supply, but holders do not push them and prices are maintained.

CINCHONA.—Recent transactions have been generally in favour of buyers, and the supply offered was much in excess of requirements. Of 7,000 packages of South American offered at last week's sales less than 1,000 were actually sold and generally at a slight decline from previous prices. East Indian bark was also easier, but Ceylon sorts more generally maintained their values.

CINNAMON.—At the quarterly sales on May 30 there was a good demand, and about 1d. higher was realised on the average.

CLOVES are dull, and sell at a decline of about 1d. for Zanzibar, and 2d. for Penang.

COD-LIVER OIL.—The reports from most of the Norway fisheries indicate that there must be a scarcity of white and yellow oil this year. The Finland fishery is not yet ended, but even if that should prove abundant there must still be a deficit in the stock.

CUBEBS are held firmly for high rates, say 112s. 6d. to 115s.

GALLS are not held so firmly. China, for fair to good, have sold at 62s. to 63s. Turkey blues are quoted at 55s. to 57s. 6d., down to 45s. for pinky white.

GINGER.—New Cochin has sold at a decline of from 1s. to 2s. per cwt.

GLYCERINE.—It is stated that a noted Austrian firm have been offered 20 per cent. above current prices for the guarantee of the whole of their product up to the end of 1882.

GUMS.—Arabie is in large supply, and buyers refuse to give present prices. Asafetida is not much inquired for. Benjamin.—Sales only made at some decline. Copal, too, is rather weak. Myrrh and olibanum also show a similar tendency. Gamboge and kowie, on the other hand, are somewhat firmer.

MUSK.—There has been but slight competition, and prices are in buyers' favour.

OPIMUM.—No improvement has taken place in the position of this drug, though it is said that there is some disposition to take stock, dealers believing that it is not likely to be much lower. The reports of the new crop are somewhat various, as, though the weather has been generally favourable and a large supply is predicted, there seem to be grave dangers from swarms of locusts in Asia Minor. The following report by Mr. E. A. Maltass, of Smyrna, dated May 27, will indicate the position there:—

Our opium market continues in the same position, but of late there has been an active demand for the secondary and manufacturing qualities for China, England, and the Continent.

Our stock of all descriptions in Smyrna and in the interior is now reduced to 350 cases, very little of which can be classed as good, pure opium.

To day's quotations are as hereunder:—

	P.	Per chequee	Per lb. f.o.b.
	s.	d.	
New Karahissar	140	=	15 3
New current	135		14 9
Old opium	135		14 9
Manufacturing talequali ..	105 to 110		11s. 6d. to 12s.

The growing crop is progressing favourably, and, although no accurate estimate can as yet be arrived at as to the ultimate outcome, it is now calculated that the yield, if all goes well, will not be less than 7,000 to 8,000 cases. This is, of course, only an approximate estimate on present appearances, and may be reduced or exceeded according to circumstances, as the poppy plantations are still liable to be injured by rain, hot southerly winds, or partly devoured by locusts, which unfortunately swarm all over the country this year.

Taking the present uncertain position into consideration as to the extent of the coming crop, it appears strange that within the last two months the fall in prices should have been so rapid, for, even allowing that henceforward nothing occurs to the detriment of the growing crop, and that 8,000 or even 9,000 cases are produced, we cannot reasonably expect that the new drug when ready for shipment will be obtainable under 130p., or 11s., for fine selected, and 105p., to 110p., or 11s. 6d. to 12s., per lb. f.o.b. for manufacturing qualities, more especially as the stock of old opium in this

country will be reduced to a minimum, and in the consuming markets the quantity remaining on hand will be less than what it was last year at the corresponding period. It must further be borne in mind that owing to the enhanced value of this drug since last spring speculators kept aloof, and consumers supplied themselves but sparingly, and are consequently quite out of stock; but when fine opium is obtainable at about 11s., and manufacturing at 12s., it will be a safe price both for speculators and consumers to operate largely. It is, therefore, very improbable that we shall witness any farther decline on present quotations, and should anything occur to the detriment of the growing crop so as to reduce the present estimated quantity a couple of thousand cases, it is not improbable that we may see an advance of 2s. to 3s. per lb. when the new drug is ready for shipment.

RHUBARB is weak for lower qualities. Bold bright Shenshi root has sold at 3s. 10d. and 3s. 11d. for fine trimmed, down to 3s. for small. Canton root, Shenshi character, varies from 1s. 4d. to 2s. 4d.

SHELLAC.—Something like a speculative demand has arrested the decline in price, and on some sorts an advance has lately occurred.

VANILLA.—The Réunion production is reported to have amounted only to 20,000 kilos., against 44,000 last year. The price asked in France for this product is consequently high, running to 100f. per kilo. for first quality. The Mexican harvest is said to have proved favourable, equalling last year both for quantity and quality. For first quality of this 115f. to 120f. per kilo. is asked.

ONLS.—Almond expressed now sells at 1s. 2d. Castor is unchanged. Cod-liver oil is higher for new, and will probably command better average prices during the year. An advance on present rates would not be altogether unexpected.

Linseed oil has advanced to 26l. 7s. 6d. for spot, and 26l. 10s. for July-August. Rape is steady. Olive is still in inactive demand. What business there is goes for Spanish and Levant oils, as Italian holders demand higher prices for their article. The reports of the growing crops of olives are quite favourable. Cochin cocanaut is a trifle easier in the absence of demand, lard is cheaper, and fish oils are almost unsaleable.

Turpentine has advanced considerably during the month, being now worth 35s. spot, 32s. July, and 30s. September-December. Petroleum, too, responding to better quotations from America and the Continent, has recovered, and buyers seem convinced that the present is a suitable time to buy forward. July prices are 7⁵/₁₆d., and September-December, 7³/₁₆d.

*Monthly Statement of the Stocks at the Port of London
on May 31, 1881 and 1880.*

	1881	1880		1881	1880
Aloes	2,982	1,421	Gum (cont.)—		
"	—	12	Damar.... pkgs	3,266	4,570
"	170	280	Galbanum ..	1	12
Alsead, Star chta	572	410	Gamboge.. "	244	145
Arrowroot	13,787	13,166	Guaicum.. "	15	65
" bxs & tins	8,724	14,544	Kino	21	34
Balsam	8	19	Kowie	755	446
Bark, Medicinal			Mastic	123	125
cks, &c.	1, 75	697	Myrrh, E.I. "	232	171
srns, &c.	30,424	19,676	Olibanum.. "	6,745	3,971
Borax	895	570	Sandarac.. "	146	382
Bees' Wax	1,014	802	Senegal.....	9	21
"	1,625	1,025	Tragacanth pkgs	2,120	2,738
"	10	124	Ipecac.	107	139
"	6,323	11,570	Jalap	243	235
Wax, Jap. veg. pkgs	7,650	6,551	Nux Vomica pkgs	1,520	995
Camphor	478	425			
Cardamoms	579	1,355	Oil—		
Cocoe, Ind. bgs, &c.	370	360	Castor	76	338
Colombo root pkgs	579	360	"	9,999	15,138
Cream Tartar..	94	187	Palm	453	1,022
Cubebs	93	98	Cocanaut	10,924	5,923
Dragonsblood chta	244	173	Olive	1,7 7	1,221
Galls, E.I. cks & cs	2,749	3,567	Aniseed	110	277
M'terranean sks	2,676	562	Cassia	327	349
			Opium	1,027	482
Gum—			Rhubarb.....	814	962
Ammoniac pkgs	305	297	Sarsaparilla ..	423	550
Animi & Copal			Senna	1,481	1,410
pkgs	4,125	1,897			
Arab'c, Barbary			Shellac—		
pkgs	1,151	2,376	Orange....	15,118	23,000
Turkey ..	2,109	3,149	Garnet.. "	13,235	14,584
E.I.	2,821	1,910	Button.. "	4,441	2,553
Asafetida ..	6 9	192	Turmeric	2,866	3,054
Benjamin.. "	2,787	2,198	Vermilion	12	157

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.

	Last Month		This Month	
	s. d.	s. d.	s. d.	s. d.
ACIDS—				
Acetic .....per lb.	0 3 ³ / ₄	to 0 0	0 3 ³ / ₄	to 0 0
pure "	0 5	.. 0 9	0 5	.. 0 9
glacial .. "	1 0	.. 1 11	1 0	.. 1 11
Benzoic Sublimate ..	6 0	.. 0 0	6 0	.. 0 0
Ex. Gum. .per oz.	0 9	.. 0 0	0 9	.. 0 0
Citric "	2 0	.. 0 0	2 0	.. 0 0
Gallic..... "	4 3	.. 0 0	4 3	.. 0 0
Hydrochlor.....per cwt.	5 0	.. 7 0	5 0	.. 7 0
Nitric .....per lb.	0 3	.. 0 4	0 3	.. 0 4
Oxalic "	0 4 ¹ / ₂	.. 0 0	0 4 ¹ / ₂	.. 0 0
Sulphuric "	0 1	.. 0 0	0 1	.. 0 0
Salicylic "	8 0	.. 8 6	8 0	.. 8 6
Tannic "	1 7	.. 2 8	1 7	.. 2 8
Tartaric English ..	1 7 ¹ / ₂	.. 1 8	1 7 ¹ / ₂	.. 1 8
foreign .. "	1 7	.. 1 7 ¹ / ₂	1 7	.. 1 7 ¹ / ₂
ANTIMONY ore .....per ton	0 0	.. 0 0	0 0	.. 0 0
crude .. per cwt.	49 0	.. 42 0	49 0	.. 42 0
star "	61 0	.. 62 0	61 0	.. 62 0
ARSENIC, lump "	24 0	.. 0 0	24 0	.. 0 0
powder..... "	10 6	.. 10 9	10 6	.. 10 9
BRIMSTONE, rough .....per ton	110 0	.. 123 0	110 0	.. 123 0
roll .. per cwt.	8 6	.. 9 6	8 6	.. 9 6
flour..... "	10 6	.. 12 6	10 6	.. 12 6
GLYCERINE, German				
refined..... "	72 0	.. 88 0	72 0	.. 88 0
crude brown .. "	50 0	.. 52 0	50 0	.. 52 0
IODINE, dry .....per oz.	0 6	.. 0 6 ¹ / ₂	0 6	.. 0 6 ¹ / ₂
MAGNESIA, calcined, per lb.	1 0	.. 1 6	1 0	.. 1 6
Pond, Hwds..... "	5 0	.. 0 0	5 0	.. 0 0
MERCURY .....per bottle	125 0	.. 127 6	125 0	.. 127 6
MINIUM, red .....per cwt.	16 9	.. 17 0	16 9	.. 17 0
orange .. "	25 6	.. 29 6	25 6	.. 29 6
PRECIPITATE, red .. per lb.	3 0	.. 0 0	3 0	.. 0 0
white .. "	2 11	.. 0 0	2 11	.. 0 0
PRUSSIAN BLUE .. "	0 0	.. 0 0	0 0	.. 0 0
SANTONINE "	21 6	.. 0 0	21 6	.. 0 0
SALICINE..... "	7 6	.. 0 0	7 6	.. 0 0
THYMOL "	25 0	.. 0 0	25 0	.. 0 0
SALTS—				
Alum .....per ton	120 0	.. 0 0	120 0	.. 0 0
powder..... "	147 6	.. 0 0	147 6	.. 0 0
Ammonia:				
Carbonate..... per lb.	0 6 ¹ / ₂	.. 0 6 ¹ / ₂	0 6 ¹ / ₂	.. 0 6 ¹ / ₂
Hydrochlorate, crude,				
white per ton	600 0	.. 760 0	600 0	.. 760 0
Sulphate..... "	380 6	.. 490 0	380 6	.. 490 0
Argol, Cape .....per cwt.	8 0	.. 98 0	8 0	.. 98 0
Red..... "	65 0	.. 80 0	65 0	.. 80 0
Operto, red. .. "	36 0	.. 36 6	36 0	.. 36 6
Sicily .. "	0 0	.. 0 0	0 0	.. 0 0
Bleaching powd. "	5 0	.. 5 3	5 0	.. 5 3
Borax, British refind. ..	69 0	.. 62 0	69 0	.. 63 0
Calomel .....per lb.	2 8	.. 0 0	2 8	.. 0 0
Chloral hydrate, Saame's ..	4 2	.. 4 4	4 2	.. 4 4
Liebreich's .. "	5 6	.. 6 0	5 6	.. 6 0
Copper:				
Sulphate ....per cwt.	19 3	.. 0 0	19 0	.. 19 3
Copperas, green. .per ton	45 0	.. 0 0	45 0	.. 0 0
Corrosive Sublimate p. lb.	2 1	.. 0 0	2 1	.. 0 0
Cr. Tartar, French, p. cwt.	120 0	.. 121 0	120 0	.. 121 0
brown .. "	55 0	.. 0 0	55 0	.. 0 0
Epsom Salts "	4 0	.. 4 9	4 0	.. 4 9
Glauber Salts "	4 3	.. 5 6	4 3	.. 5 6
Magnesia: Carbonate ..	42 6	.. 0 0	42 6	.. 0 0
Pond, Hwds. "	72 0	.. 0 0	72 0	.. 0 0
Morphia Murias .. "	7 3	.. 7 6	7 3	.. 7 6
Potash:				
Bichromate ....per lb.	0 6	.. 0 0	0 6	.. 0 0
Carbonate:				
Potashes, Canada, 1st				
sort .....per cwt.	24 0	.. 24 6	24 0	.. 24 6
Pearlashes, Canada, 1st				
sort .....per cwt.	40 0	.. 41 0	38 0	.. 0 0
Chlorate .....per lb.	0 6	.. 0 6 ¹ / ₂	0 6	.. 0 0
Prussiate "	0 9 ³ / ₄	.. 0 10	0 9 ³ / ₄	.. 0 10
red..... "	1 11	.. 0 0	1 11	.. 0 0
Sulphate "	8 6	.. 9 0	8 6	.. 9 0
Tartate (see Argol and Cream of Tartar)				
Potassium:				
Bromide "	1 5	.. 1 6	1 5	.. 1 6
Chloride.....per cwt.	7 0	.. 0 0	8 0	.. 0 0
Iodide .....per lb.	8 0	.. 0 0	8 0	.. 0 0
Quinine:				
Sulphate, British, in				
bottles .....per oz.	11 6	.. 0 0	11 0	.. 0 0
Sulphate, French .. "	11 6	.. 0 0	11 0	.. 0 0
Sulphate, German .. "	10 0	.. 0 0	1 0	.. 0 0
Sal Acetos .....per lb.	0 7	.. 0 0	0 6 ¹ / ₂	.. 0 0
Sal Ammoniac, Brit. cwt.	44 0	.. 45 0	44 0	.. 45 0

	Last Month		This Month	
	s. d.	s. d.	s. d.	s. d.
Saltpetre:				
Bengal, 6 per cent. or under .....per cwt.	21 0	to 21 6	20 3	to 20 9
Bengal, over 6 per cent. per cwt.	20 0	.. 20 6	19 6	.. 20 0
British, refined .. "	25 6	.. 28 0	24 9	.. 26 6
Soda: Bicarbonate .. "	10 0	.. 0 0	10 0	.. 0 0
Hwds. "	45 0	.. 0 0	45 0	.. 0 0
Carbonate:				
Soda Ash ..per deg.	0 1 ³ / ₄	.. 0 0	0 1 ³ / ₄	.. 0 0
Soda Crystals per ton	62 0	.. 0 0	66 3	.. 67 6
Caustic "	9 9	.. 10 0	9 6	.. 10 0
Hyposulphite, per cwt.	8 0	.. 0 0	8 0	.. 0 0
Nitrate "	14 9	.. 15 0	14 3	.. 0 0
Zinc Sulphate .. "	12 0	.. 14 0	12 0	.. 14 0
SUGAR OF LEAD, White, cwt.	36 0	.. 38 0	36 0	.. 38 0
Brown, cwt.	26 0	.. 0 0	26 0	.. 0 0
VERDIGRIS .....per lb.	0 10 ¹ / ₂	.. 1 2	0 10 ¹ / ₂	.. 1 2
VERMILION, English .. "	2 5	.. 0 0	2 5	.. 0 0
China .. "	1 10	.. 1 11	1 10	.. 1 11
DRUGS.				
ALOE, Hepatic .....per cwt.	80 0	.. 150 0	80 0	.. 150 0
Socotrine .. "	55 0	.. 200 0	55 0	.. 200 0
Cape, good. "	50 0	.. 51 0	52 0	.. 71 0
Inferior "	45 0	.. 49 6	40 0	.. 51 6
Barbadoes .. "	65 0	.. 170 0	45 0	.. 160 0
Curacao .. "	38 0	.. 65 0	38 0	.. 65 0
AMBERGRIS, grey.....oz.	70 0	.. 115 0	91 0	.. 115 0
BALSAM—				
Canada .....per lb.	1 0	.. 1 1	1 0	.. 1 1
Capivi "	2 9	.. 2 10	2 6	.. 2 9
Feru "	10 0	.. 10 9	10 0	.. 10 6
Tolu "	2 4	.. 2 5	2 3	.. 2 4
BARKS—				
Canella alba.....per cwt.	15 0	.. 18 0	15 0	.. 18 0
Cascarilla "	20 0	.. 24 0	21 0	.. 24 0
CINCHONA—				
Calisaya, good and fine per lb.	5 6	.. 7 6	5 6	.. 7 6
medium "	2 0	.. 4 6	2 0	.. 4 6
N. Granad., fair to fine ..	4 6	.. 7 11	4 6	.. 7 11
mid. to fair .. "	2 0	.. 4 0	2 0	.. 4 0
Columbian, fine "	3 11	.. 4 11	3 11	.. 4 11
ord. to fair .. "	0 6	.. 2 0	0 6	.. 2 0
Carthagea, good "	2 6	.. 4 2	2 6	.. 4 2
E. I. mossed "	3 0	.. 9 6	3 0	.. 9 6
Ceylon, crown "	4 6	.. 8 0	4 6	.. 8 0
red "	1 6	.. 4 0	1 6	.. 4 0
Darjeeling, red fine..... "	3 6	.. 4 0	3 6	.. 4 0
BUCHU LEAVES "	2 0	.. 1 1	0 2	.. 1 0
CAMPHOR, China .....per cwt.	85 0	.. 87 6	85 0	.. 0 0
Japan .. "	87 6	.. 90 0	87 6	.. 0 0
Refin. Eng. per lb.	1 3	.. 1 3 ¹ / ₂	1 3	.. 1 4
CANTHARIDES, China .. "	1 5	.. 0 0	1 4	.. 0 0
Russian .. "	3 0	.. 3 4	3 0	.. 3 4
CHAMOMILE FLOWERS p. cwt.	25 0	.. 75 0	25 0	.. 75 0
CASTOREUM .....per lb.	20 0	.. 35 0	20 0	.. 35 0
DRAGON'S BLOOD, Ip. p. cwt.	93 0	.. 330 0	93 0	.. 330 0
FRUITS AND SEEDS (see also Seeds and Sp. es.)				
Anise, China Star per cwt.	82 6	.. 0 0	85 0	.. 86 6
Spanish, &c. "	24 0	.. 37 0	28 0	.. 37 0
Beans, Tonquin.....per lb.	3 6	.. 6 9	3 6	.. 6 9
Cardamoms, Malabar				
good "	6 3	.. 7 6	6 3	.. 7 6
inferior..... "	3 0	.. 6 0	3 0	.. 6 0
Aleppy "	2 6	.. 6 0	2 6	.. 6 0
Madras "	2 6	.. 4 6	2 6	.. 4 6
Ceylon "	3 0	.. 7 6	3 0	.. 8 8
Cassia Fistula.....per cwt.	12 0	.. 20 0	12 0	.. 15 0
Cocculus Indicus .. "	7 6	.. 8 6	7 6	.. 8 6
Colocynth, apple ..per lb.	1 2	.. 1 6	1 2	.. 1 6
Croton Seeds .....per cwt.	65 0	.. 67 6	65 0	.. 67 6
Cubeb "	115 0	.. 0 0	110 0	.. 115 0
Cumin "	41 6	.. 47 6	40 0	.. 47 6
Fenugreek "	10 0	.. 13 0	9 0	.. 13 0
Juniper Berries .. "	10 3	.. 10 6	19 3	.. 10 6
Nux Vomica "	6 0	.. 10 0	6 0	.. 10 0
Tamarinds, East India, ..	5 6	.. 13 6	5 6	.. 13 6
West India .. "	10 0	.. 13 0	10 0	.. 13 0
Vanilla, large per lb.	30 0	.. 32 6	27 0	.. 31 0
inferior .. "	21 0	.. 29 6	20 0	.. 26 6
GINGER, Preserved .. "	0 5	.. 0 7	0 4 ¹ / ₂	.. 0 7
HONEY, Chili .....per cwt.	43 0	.. 60 0	40 0	.. 65 0
Jamaica .. "	35 0	.. 45 0	30 0	.. 47 0
IPERCACUANHA per lb.	4 2	.. 5 0	5 0	.. 5 6
ISINGLASS, Brazil .. "	2 0	.. 4 8	2 2	.. 5 1
Tongue sort .. "	2 6	.. 4 10	2 9	.. 5 1
East India .. "	1 11	.. 5 1	0 11	.. 5 1
West India .. "	3 0	.. 4 10	3 0	.. 4 10
Russ. long staple ..	7 0	.. 10 0	7 0	.. 10 0
inferior .. "	0 0	.. 0 0	0 0	.. 0 0
Simovia .. "	2 3	.. 2 6	2 3	.. 2 6
JALAP, good..... "	0 10	.. 0 11	0 10	.. 1 0
infer. & stems .. "	0 7	.. 0 9	0 8	.. 0 9
LEMON JUICE per degree	0 0 ¹ / ₂	.. 0 1 ¹ / ₂	0 0 ¹ / ₂	.. 0 1 ¹ / ₂
LIME JUICE.....per gall.	1 5	.. 1 8	1 6	.. 1 8
LIQUORICE, Spanish per cwt.	30 0	.. 36 0	30 0	.. 36 0
Liquorice Root .. "	16 0	.. 23 0	16 0	.. 23 0
MARNA, flaky .....per lb.	2 6	.. 4 8	4 0	.. 4 8
MUSK, Pod.....per oz.	10 6	.. 57 0	19 0	.. 53 0
Grain "	36 0	.. 65 0	30 0	.. 61 0
Yunnan "	32 0	.. 41 0	32 0	.. 38 6
OILS (see also separate list)				
Almond, expressed per lb.	1 3	.. 0 0	1 2	.. 0 0
Castor, 1st pale.... "	0 3 ¹ / ₂	.. 0 3 ¹ / ₂	0 3 ¹ / ₂	.. 0 3 ¹ / ₂
second .. "	0 3 ¹ / ₂	.. 0 3 ¹ / ₂	0 3 ¹ / ₂	.. 0 3 ¹ / ₂
Col Liver per gall.	4 6	.. 4 9	4 6	.. 5 6

	Last Month			This Month				Last Month			This Month			
	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.	
Essential Oils:														
Almond.....per lb.	28	0	to	30	0	0		0	0	to	0	0	0	
Anise-seed, star..	8	3	"	0	0	0		9	0	"	0	0	0	
German	10	9	"	0	0	0		10	9	"	0	0	0	
Bergamot	9	0	"	10	0	0		9	0	"	13	0	0	
Cajeput.....per bottle	3	9	"	4	0	0		3	0	"	3	4	0	
Caraway.....per lb.	2	6	"	6	6	6		2	6	"	6	6	6	
Cassia	4	0	"	4	3	0		4	0	"	4	3	0	
Cinnamon.....per oz.	7	6	"	7	6	0		7	6	"	7	6	0	
Cinnamon-leaf..	0	2½	"	0	0	0		0	2½	"	0	0	0	
Citronelle	0	3½	"	0	0	0		0	8½	"	0	0	0	
Clove	6	9	"	7	9	0		7	0	"	7	9	0	
Lavender Exot..per lb.	1	6	"	7	6	0		1	6	"	7	6	0	
Mitcham	130	0	"	0	0	0		130	0	"	0	0	0	
Lemon.....	6	9	"	7	9	0		6	6	"	7	6	0	
Lemongrass ...per oz.	0	3	"	0	0	0		0	3	"	0	0	0	
Neroli	7	0	"	10	3	0		7	0	"	10	3	0	
Nutmeg	0	5½	"	0	0	0		0	5½	"	0	0	0	
Orange.....per lb.	7	3	"	11	3	0		7	3	"	11	3	0	
Otto of Roses...per oz.	15	0	"	25	0	0		12	0	"	20	0	0	
Patchouli	2	0	"	3	10	0		2	0	"	3	10	0	
Peppermint:														
American ...per lb.	12	6	"	0	0	0		12	6	"	0	0	0	
(H. G. Hotchkiss),	14	6	"	0	0	0		13	3	"	0	0	0	
English	30	0	"	0	0	0		29	0	"	30	0	0	
German	13	9	"	0	0	0		13	9	"	0	0	0	
Rosemary	1	6	"	2	11	0		1	6	"	2	11	0	
Sassafras	2	6	"	0	0	0		2	3	"	0	0	0	
Spearmint	13	0	"	0	0	0		13	0	"	0	0	0	
Thyme.....	1	8	"	4	7	0		1	8	"	4	7	0	
Mace, expressed ..per oz.	0	0	"	0	0	0		2	0	"	3	0	0	
Opium, Turkey...per lb.	17	0	"	19	0	0		18	0	"	19	0	0	
inferior	12	6	"	16	0	0		14	0	"	17	6	0	
Quassia (bitterwood) per ton	80	0	"	100	0	0		80	0	"	100	0	0	
Rhubarb, China, good and														
fine	3	6	"	4	7	0		3	0	"	4	3	0	
Mid. to fair.....	1	8	"	2	11	0		1	4	"	3	0	0	
Ordinary	0	9	"	1	7	0		0	9	"	1	3	0	
ROOTS—Calumba...per cwt.	34	0	"	40	0	0		29	0	"	42	0	0	
China	23	0	"	24	0	0		23	0	"	24	0	0	
Chiretta	0	9	"	0	10	0		0	9	"	0	10	0	
Galangal	20	0	"	22	0	0		18	0	"	22	0	0	
Gentian	18	0	"	18	6	0		18	0	"	18	6	0	
Orris	50	0	"	64	0	0		50	0	"	64	0	0	
Pellitory	55	0	"	65	0	0		55	0	"	65	0	0	
Pink	0	8	"	1	3	0		0	8	"	1	3	0	
Rhatany	0	13	"	0	4	0		0	2	"	0	4	0	
Seneka	2	7	"	2	9	0		2	7	"	2	9	0	
Snake	1	5	"	1	6	0		1	5	"	1	8	0	
Saffron, Valencia ..	45	0	"	50	0	0		45	0	"	46	0	0	
Salep	120	0	"	130	0	0		120	0	"	130	0	0	
Sarsaparilla, Lima per lb.	0	5	"	0	5½	0		0	5	"	0	6	0	
Guayaquil	1	3	"	1	4	0		1	3	"	1	4	0	
Honduras	1	5½	"	2	0	0		1	5½	"	2	0	0	
Jamaica	1	6	"	1	9	0		1	6	"	1	10	0	
Sassafras	4	0	"	9	0	0		4	0	"	9	0	0	
Scammony, Virgin ..per lb.	35	0	"	44	0	0		35	0	"	44	0	0	
second & ordinary ..	10	0	"	30	0	0		10	0	"	30	0	0	
Senna, Bombay	0	1	"	0	3	0		0	1	"	0	3	0	
Tinnivelly	0	13	"	1	8	0		0	13	"	1	6	0	
Alexandria	0	0	"	0	0	0		0	0	"	0	0	0	
Spermaceti, refined ..	1	3	"	0	0	0		1	3	"	0	0	0	
American	1	0½	"	1	1	0		1	0½	"	1	1	0	
Squills.....	0	3	"	0	2	0		0	1	"	0	2	0	
GUMS.														
Ammoniac drop ..per cwt.	1	10	"	2	1	0		1	10	"	2	1	0	
Animi, fine washed ..	18	35	"	19	10	0		18	15	"	19	10	0	
sorts	10	10	"	16	10	0		10	10	"	16	10	0	
Arabic, pale picked ..	1	17	0	2	12	6		1	17	0	2	12	6	
sorts, md. to fin.	1	10	"	1	13	0		1	10	"	1	13	0	
Turkey, pick. gd. to fin.	6	10	"	9	10	0		6	10	"	9	10	0	
second & inf.	3	0	"	6	0	0		3	0	"	6	0	0	
sorts	2	2	6	2	15	0		2	2	6	2	15	0	
Assafetida, cm. to fin	0	11	"	3	11	0		0	12	"	2	8	0	
Benjamin, 1st & 2nd ..	16	0	"	24	0	0		16	0	"	24	0	0	
		£	s.	£	s.	£	s.			£	s.	£	s.	
Copal, Manilla.....per cwt.	18	0	"	65	0	0		13	0	"	65	0	0	
Angola, red.....	0	0	"	0	0	0		0	0	"	0	0	0	
Dammar, pale	90	0	"	97	6	0		93	0	"	96	0	0	
Euphorbium	38	0	"	60	0	0		38	0	"	60	0	0	
Galbanum	0	0	"	0	0	0		0	0	"	0	0	0	
Gamboge, pkcd. pipe per cwt.	26	0	"	310	0	0		240	0	"	320	0	0	
Guaiacum	1	0	"	3	2	0		1	0	"	3	2	0	
Kino	57	0	"	120	0	0		57	0	"	120	0	0	
Kowrie, sorts	47	0	"	55	0	0		47	0	"	55	0	0	
selected	160	0	"	200	0	0		160	0	"	210	0	0	
Mastic, picked	2	6	"	4	0	0		2	6	"	4	0	0	
Myrrh, gd. & fine per cwt.	195	0	"	240	0	0		182	6	"	220	0	0	
ord. to fair.....	75	0	"	190	0	0		70	0	"	180	0	0	
Olibanum p. drop	49	0	"	67	6	0		55	0	"	60	0	0	
amber & ylw.	48	0	"	58	0	0		35	0	"	54	0	0	
Senegal	35	0	"	50	6	0		35	0	"	50	6	0	
Sandarac	89	0	"	115	0	0		89	0	"	115	0	0	
Shellac, Orange	160	0	"	165	0	0		157	6	"	165	0	0	
Liver	127	6	"	142	6	0		125	0	"	140	0	0	
Thus	0	0	"	0	0	0		0	0	"	0	0	0	
Tragacanth, leaf	240	0	"	400	0	0		240	0	"	440	0	0	
in sorts	40	0	"	210	0	0		40	0	"	210	0	0	
OILS.														
Seal, pale	30	0	"	31	0	0		30	0	"	31	0	0	
yellow to tinged ..	24	0	"	29	0	0		24	0	"	29	0	0	
brown	23	0	"	0	0	0		23	0	"	0	0	0	
Sperm.....	60	0	"	0	0	0		58	0	"	59	0	0	
Oils, continued:—														
Body	per tun	0	0	to	0	0		0	0	to	0	0		
Cod	"	32	17	"	0	0		32	0	"	0	0		
Whale, South Sea, pale ..	"	28	0	"	0	0		28	0	"	0	0		
yellow	"	27	0	"	0	0		27	0	"	0	0		
brown	"	22	0	"	0	0		22	0	"	0	0		
East India, Fish	"	0	0	"	0	0		0	0	"	0	0		
Olive, Galipoli.....per ton	"	0	0	"	0	0		0	0	"	0	0		
Gioja	"	0	0	"	0	0		0	0	"	0	0		
Levant	"	35	0	"	0	0		33	0	"	0	0		
Mogador	"	35	0	"	0	0		34	0	"	0	0		
Spanish	"	35	1	"	36	0		37	0	"	0	0		
Sicily	"	37	0	"	0	0		37	0	"	0	0		
Cocoonut, Coch.	"	30	10	"	31	10		39	0	"	31	0		
Ceylon	"	28	5	"	0	0		28	5	"	0	0		
Mauritius	"	28	5	"	28	13		28	10	"	29	0		
GROUND NUT AND GINGELLY:														
Bombay	"	0	0	"	0	0		0	0	"	0	0		
Madras	"	0	0	"	0	0		0	0	"	0	0		
Palm, fine.....	"	31	0	"	31	13		31	0	"	0	0		
Linseed	"	25	5	"	25	12	6		26	0	"	26	7	6
Rapeseed, English, pale ..	"	29	15	"	0	0		29	15</					



38/7. **Cleaning Old Engravings.**—In March, 1877, we published a communication on this subject from Mr. Joseph Ince, which enclosed a letter from Mr. F. Andrews.

If brown spots and rings of mildew have not made their appearance, float the engraving face downwards for 24 hours on a large quantity of water in a vessel perfectly free from grease and soil of all kinds. Lift it from the water on a perfectly clean sheet of glass, drain, transfer to blotting-paper without touching it, then transfer to fresh blotting-paper, dry, rub with bread as is done in drawings, and iron.

If the stains are bad or are not removed by this plan place the engravings in a shallow dish and pour water over them till they are completely soaked. Carefully pour off the water, and replace it by solution of chloride of lime (1 part liq. calcis chlorata, British Pharmacopoeia, to 39 parts water). As a rule the stains disappear as if by magic. If not, pour on the spot pure liq. calcis chlorate if that does not succeed, add a little acid. nitrohydrochlor. dil. As soon as the stain disappears wash the engraving carefully with successive portions of water till all the chlorine is removed. Then steep it in a weak solution of glue or gelatine, which may be coloured with coffee grounds to give the engraving a yellow colour. Then dry between blotting paper under a weight, and iron with a sheet of clean paper between the iron and the print. Small grease spots may be removed by putting powdered French chalk over them, a piece of clean blotting paper over the chalk, and a hot iron over that. If the stains are larger benzine must be used, applying it in a circle round the stain before touching the stain itself.

Pro Bono Publico.—We have not received any similar complaints.

THE EXCHANGE COLUMN.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Having read Mr. Bentley's letter in your May issue respecting the sale of formulae through your Exchange Column, I should be glad if you will allow me to state in self-defence that, during the five years I have been an advertiser, I have never had a complaint as to my receipts being worthless; on the other hand, I hold testimonials (if they may be so termed) from some of the largest wholesale as well as retail firms in the trade, both at home and abroad. Of course, these are private communications, but, should you think proper, I shall be pleased to hand them to you, Mr. Editor, for your perusal.

I think it would have been more satisfactory had Mr. Bentley mentioned the name (even if not for publication) of his "swindler."

Yours obediently,

79 Gaisford Street, N.W., "ANALYST," CARE OF MR. WARNES.
June 8, 1881.

HOFF'S MALT EXTRACT.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—In reference to certain advertisements which have appeared in your journal, I will be glad if you will allow me to state that it is now two or three years since I chemically examined Hoff's Malt Extract, and that nobody is authorised to use analyses published in my paper on the "Influence of Malt Liquors upon Digestion and Nutrition," for the purpose of describing what is now in the market.

It is, however, quite competent for vendors of this preparation, if they choose to do so, to guarantee that its composition accords with the preparation I examined in 1878, or to get any other competent chemist to do this. I am too busy in other directions to undertake analytical work at present.

Yours truly,

J. J. COLEMAN, F.I.C., F.C.S.

45 West Nile Street, Glasgow, May 33.

Mr. Coleman owes us an explanation of the foregoing. The only advertisements in our pages in which Mr. Coleman's experiments have been alluded to have been those of Mr. Newman, of some two or three years ago, soon after the account of them had been published. Lately, Mr. Leopold Hoff has published in various journals, but not in this one, a letter signed "J. J. Coleman," dated April 28, 1881, and addressed to "M. Hoff, Esq., Hamburg," which, as far as language can be trusted to mean anything, clearly authorises him (M. Hoff) to assume that Mr. Coleman's experiments were made with his preparation. Since then we hear that Mr. Newman is commencing actions against the journals which have published Mr. Coleman's letter. We do not know which of the parties may commence an action against us for the foregoing letter, as we cannot in the least degree determine against whom it is directed.

188/38. *J. D.* had better apply to the Secretary of the Royal College of Surgeons, Edinburgh.

PHYSICIANS AND HOMOEOPATHS.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Premising that a commentary, however trite, on any published inquiry, is not necessarily a reply thereto, we venture to ask you to find space for the following, in connection with Dr. Bayes's letter on p. 229 of your last issue.

The inquiries addressed to the President of the Royal College of Physicians, might, to some readers, appear rather in the nature of querulous questioning, than likely to advance the "healing art." This point is one on which we do not offer an opinion. We content ourselves, however, with asking the attention of your readers to the following very fair and forcible statement from the *Lancet* of April 30, p. 721.

"It is needless to say that there are no such things as 'homoeopathic remedies,' recognised by the profession, which is ready to use for the benefit of the sick anything which may prove of service, *no matter by whom suggested or discovered.*" (The italics are ours.)

We are, dear sir,

Yours faithfully,

F. NEWBURY & SONS.

May 25.

37/183. *Kino.*—If you make "Jones's Cure for Rheumatism," you could no doubt get legal protection for any property you might create therein. But it is not likely that any court would prevent any future Jones from using such a natural form of words for his preparation if he should desire to do so, and unless he should in some marked manner copy the style of your article, with the intention, as the Court might decide, of deceiving the public. If, however, you should choose a more fancy combination of words, such as "Jones's Rheumatic Reliever," it is probable, but not certain, that the Court would prohibit a copy of such a title by any subsequent Jones. This would be independent of any trade-mark. Neither title could be registered as a trade mark, and certainly not the name "Jones."

32/186. *W. S. P.*—The title "Fruit Effervescent Saline," with your own name as maker, would most likely be regarded by a Court of law as an infringement of Mr. Eno's rights. Such questions as are here put to us (and we have replied to a good many of a similar nature) can easily be judged by a simple test. In the title proposed is there any idea of benefiting by the similarity of such title with some other of more or less popularity? There can be no moral right to an advantage gained in such a manner, and probably there is no legal right either.

18°/42. **Anatomy of the Foot.**—In answer to "W. H. B.," "M. A." writes that the only recent work on this subject is George Murray Humphry's book, "The Human Foot and the Human Hand," Cambridge, 1861, 12mo., published by Macmillan, at 4s. 6d.

185/70. *E. S. F.* **Pulvis Fenugraeci Co.**—The only formula we can find at all corresponding to this name is that of "Resolvent Meals" in Jourdan's "Pharmacopoeia Universalis," vol. 2, p. 693.

RESOLVENT MEALS.

Fenugreek seeds, Tares,
Lupinus and Peas, of each equal parts.

Pulverise and mix.

We find no formula for Pulv. Gentianae Co. in the usual books of reference.

You had better advertise your books in the Exchange Column, asking for offers.

Stokes' Liniment.—In reply to "J. C. M." (174/35), Mr. A. W. Test, of Camden, New Jersey, sends us the subjoined formula, which slightly differs from that which we published last month. Mr. Test believes the liniment originated in Baltimore:—

Oil turpentine	fl. 3iiij.
Strong acetic acid (1·047 U.S. Ph.) ..	fl. 3ss.
Yolk of 1 egg	
Rose water	fl. 3iiij.
Oil lemon	℥50

STOKES' LINIMENT.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—I think some explanation is necessary regarding the proprietary of the linim. tereb. acetic. the popular formula for which you publish in your May issue as that of Stokes' liniment. I had lately a prescription handed to me for Graves' liniment, which I could only dispense with the assistance of the chemist where it was last procured. He, on being asked for a quantity of the mixture or the formula for preparing it, sent a preparation which I had long known as St. John Long's liniment, and which I could easily have made up myself with very little trouble and at less expense.

Chemists who know of any other *aliases* for this valuable remedy should communicate these to you for the benefit of the

Durdee, May 25.

TRADE.

188/19. *Jones.*—The wax for modelling, mentioned on page 228 of our last year's volume, was for making wax flowers.

Jones wishes for a recipe for making composition similar to the Golliva used by dentists in taking impressions.

186/25. **Elliman's Embrocation.**—*J. J. J.*—The subjoined formula is reprinted from page 94 of *The Chemists and Druggists' Diary* for the current year.

"Hager states that the following formula represents this preparation :—

	Grammes.
Whites of two eggs	50
Water	50
Crude yroligneous acid	50
Spirit	60
Turpentine oil	8

M. s. a.—C. & D., 1880, p. 182."

185/40.—**Terra Cotta.**—*B. B.* wants a formula for a black stain suitable for terra-cotta, that will serve as a background for ornamental paintings.

187/69. *J. R. F.* wants to know how to **Preserve the Colour of Leaves**, ferns and the like, intended for windows and screens. The leaves are gummed on the glass and are fully exposed to the light. Perhaps some reader can supply the information. As the chlorophyll of the leaves is a vegetable substance very easily oxidised, we think it is hardly possible to preserve it long under such conditions. The best chance will be seized by protecting the leaves as much as possible from the air, as, for instance, by immersing them in a solution of glue to which a little solution of potassium bichromate has been added, taking care that every part of the leaf is coated with the glue, and then hanging it to dry in the sunlight. Leaves and ferns are often dyed with Judson's green, which brightens their colour and makes them more useful for some ornamental purposes. This dye, however, fades if long exposed to light and air. A formula under Miscellaneous Formulae this month may suggest an idea.

183/5. *S. J.*—**Emergencies.**—A small and useful work on what to do in emergencies is published by the Accident Insurance Company and sold for 6d. It was written by the late Mr. Alfred Smee, F.R.S., Surgeon to the Bank of England, and was shortly noticed in our columns in 1878. The German military surgeons are making an attempt to lessen the mortality on the battle-field. Most deaths occur from injuries to arteries, which cause speedy death from loss of blood. The soldiers are now provided with a tourniquet and a little lint and bandages, and different designs are tattooed on all parts of the body where arteries occur which might require stopping.

Ellis's "Diseases of Children," by the late senior physician to the Victoria Hospital for Sick Children is a good work. It is published by Churchills, and has reached its fourth edition.

53/24. **Essence of Rennet or Liquid Rennet**—*J. P. H.*—The following formula is recommended by Cooley :—Fresh rennet, cut small, 12 oz.; common salt, 3 oz.; knead them together and leave the mixture at rest in a cool place for five or six weeks. Then add 18 oz. of water, good ram or proof spirit, 2 oz., and digest for 24 hours, filter and colour with a little burnt sugar. Two or three teaspoonfuls will curdle a quart of milk. Some persons use white wine instead of water, with simple digestion for a day or two.

35/6. *J. G.*—The proprietors published formula for Siegel's Syrup, and one for a close imitation of the article were published in the *Chemists and Druggists' Diary* for the current year.

Can anyone furnish "J. G." with the formulae of Rooke's Elixir and Crosby's Elixir.

186/72. **Fœtid Feet.**—*Albertus* writes :—"Will you kindly publish in your next issue a form for curing sore and bad-smelling feet."

Within the last few months the cause of the fœtor and of the tenderness of the feet which accompanies it has been brought to light. Unfortunately we are unable to lay our hands on the precise report, but its substance is that a peculiar fungus—the *Bacillus fœtidus*—takes up its abode in the leather or stocking saturated with the perspiration of the foot and grows there, giving off the peculiar fœtid smell. The investigator cut a small piece from a stocking which had been worn by a person afflicted with this distressing condition, and, immersing it in a suitable fluid, he was able to watch the growth of the *Bacillus*, and to observe the development of the odour. It is evident that the first step towards the removal of the odour is to destroy the *Bacillus* and to prevent it from growing afresh. Salicylic acid seems to be suggested as the most effectual means for doing this, but the doctor who reported on the subject adopted the following mode of treatment. The feet were thoroughly washed two or three times a day and then soaked in aqueous solution of boracic acid. The feet of the stockings to be worn were steeped in the same solution and dried before use. The stockings were changed twice or thrice a day, each pair being rinsed in water and then soaked in the boracic acid solution. A jar of this was always kept handy, so that no delay or neglect was excusable.

Quite a large number of powders and solutions for deodorising fœtid feet have been devised. As the cause of the fœtor was unknown, these have been mere arrows aimed at a venture.

39/10. *R. F.*—Several methods of bleaching sponges are described on page 468 of *THE CHEMIST AND DRUGGIST* for October, 1879.

185/38. **Oleate of Mercury.**—*J. K.*—The best way to make oleate of mercury 5 per cent. is to dilute the ordinary 20 per cent. oleate. The latter can be made by triturating in a mortar 4 parts of good oleic acid with 1 part precipitated yellow oxide of mercury, afterwards leaving the mortar in a warm place till the combination is complete. One part of the 20 per cent. oleate mixed with 3 parts of oleic acid will give a 5 per cent. oleate.

185/10. *Alton.*—The formula for syr. ferri phosph. co. is published in the commonest books of reference, such as Squire's "Supplement," Cooley's "Cyclopædia," &c. We have also printed it several times in this journal.

187/69. **Brown Jack Oils.**—A country chemist will be glad to know what is meant by "brown jack oils." The bottle sent for the same has the label of a respectable chemist at Guildford upon it.

183/3. *F. J. F.* would be glad to know how to make ink pills—that is, ink in a solid form which will readily dissolve on being put into water. Can any reader supply the formula?

Varia.

FOOD FOR WILD BEASTS.—At the Jardin des Plantes in Paris, the following are the allowances for the various animals. The monkeys are fed on carrots, cooked potatoes, salad, and bread made from maize and potatoes. The lions, tigers, and bears have each 5 kilos. (including bones) of fresh meat per day. For the panther 3 to 4 kilos., and for the hyena 2 to 3 kilos. of the same suffice. The wild cat gets $\frac{1}{2}$ kilo. of fresh meat without bones. The falcon gets the same. The eagle is served with 1 kilo., and the vulture with $1\frac{1}{2}$ kilo. of fresh meat with bones per day. The elephant eats per day four bundles of sainfoin, 1 decalitre of bran, 2 kilos. of bread, 3 or 4 bundles of oat straw; cost 6f. The giraffe is supplied with 1 bundle of lucern, 2 lbs. of bread, 1 litre barley, 1 litre of beans, 2 litres of maize; cost 2½ f. to 3f. The stag, on a half-bundle of lucern and 5 litres of bran, is kept for about 1f. per day. Parrots and such-like birds are fed for 25 to 30 centimes per day.

An American correspondent sends us the following :—

MY LIVER.

WHAT makes this world so drear and sad?
Why am I never, never glad?
What is it drives me nearly mad?—

My liver!

Why do I moan and sob and sigh,
And wish—ah! wish—that I might die!
Why would I pass from earth?—oh! why?

My liver!

What is it on my breath doth seize;
Then comes in form of cough and wheeze;
Then makes me think I've Bright's disease?

My liver!

Whence is this spinning in my head?
Why are my pulses almost dead?
Why doth my stomach feel like lead?

My liver!

What makes me sausages eschew,
And huckwheat-cakes, and mince-pies, too,
And ev'rything that's nice?—Boo-hoo!—

My liver!

What is it, day and night intent
On every sort of devilment,
Doth all the ills to me present?—

My liver!

ON MAY 30 the students of the Westminster College of Chemistry and Pharmacy, accompanied by the principals and friends, made a day's excursion to Brighton. Special carriages on the 9.30 A.M. train from London Bridge conveyed the party, numbering about 120, in an hour and a half to the queen of watering places, where, favoured by magnificent weather, an exceedingly pleasant day was spent. Boating, bathing, and driving filled up the morning, and at 2 o'clock the whole party assembled in the Aquarium, where a substantial dinner was done ample justice to. The toasts of "Success to Westminster College" and the "Principals" were drunk with enthusiasm, the latter with musical honours. Recitations and songs by the students followed, and the party then dispersed to view the wonders of the briny deep or listen to the sweet music discoursed by the Aquarium band. London was reached at about 10.30 P.M., after a most enjoyable excursion.

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LIST OF OUR SPECIALITIES ON APPLICATION.

PHILIP HARRIS & CO.,**MANUFACTURING WHOLESALE & EXPORT CHEMISTS, BIRMINGHAM.****CAUTION.**

Circumstances having occurred which point to the conclusion that spurious goods have been offered under the name

DOUGHTY'S VOICE LOZENGES,

F. NEWBERY & SONS have to state that the genuine bear their Name and Address prominently upon the Label, and have done for more than TWO years past.

From "THE TIMES," April 9th, 1881.

CAUTION.—DOUGHTY'S VOICE LOZENGES.—By an Indenture, dated August 6th, 1880, and for consideration therein set forth, Miles Doughty, of Stamford Street, London, sold to Francis Newbery and Sons, of 1 King Edward Street, London, the recipe and sole right to manufacture the said Miles Doughty's Voice Lozenges, which F. Newbery & Sons had for some time previously prepared under Mr. Doughty's direction, and for his and their joint account. F. Newbery & Sons, 1 King Edward St., London, are therefore sole proprietors of Doughty's Voice Lozenges.

PULVERMACHER'S**PATENT GALVANIC CHAIN-BANDS, BELTS, AND BATTERIES**

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Approved by the Academy of Medicine of Paris, and other Medical Authorities in England and Abroad.

VITAL ENERGY, it is well known, depends upon the normal functions of the nervo-electric fluid governing the whole economy; any deficiency thereof in the system manifests itself, according to the locality, by a variety of troublesome ailments, such as

Indigestion
Liver Complaints
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Deafness
Writer's Cramp
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Asthma
Bronchitis
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Epilepsy
Rheumatism
Gout
Constipation

Local Debility
General Debility
Female Complaints
Mental and
Physical Weakness
Functional Disorders
&c., &c.

This is no conjecture, but an established scientific fact, and it must be admitted that PULVERMACHER'S GALVANIC CHAIN-BANDS, by supplying this electrical deficiency, constitutes Nature's most congenial curative in the ailments referred to, embodying a host of remedies in one

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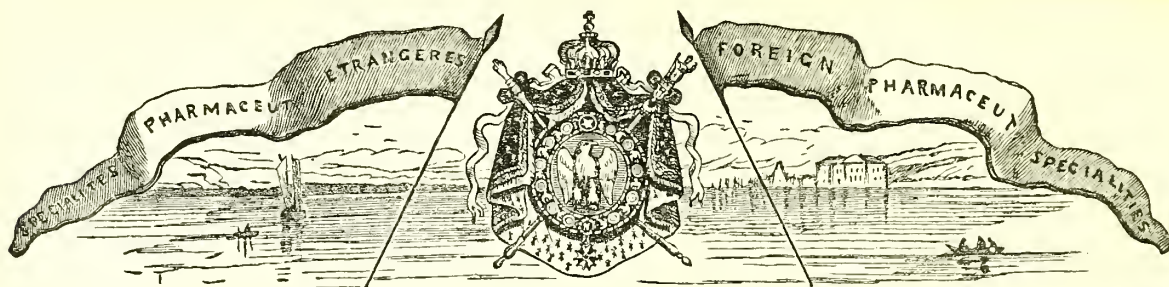
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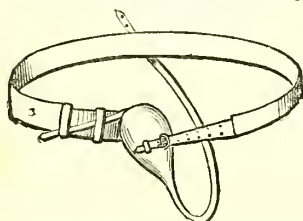
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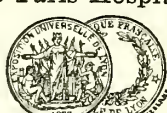
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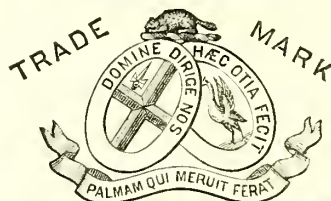
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Since we introduced this elegant preparation it has been largely employed in the treatment of gonorrhœa and gleet, and with the happiest results. It is so much superior to copaiva, as it does not interfere with the digestive organs. The disagreeable eructation which follows the administration of copaiva is not experienced, and the unpleasant rash (*Urticaria*) has not been noticed. It is especially indicated in the advanced stages of gonorrhœa and chronic gleet. If it be given in the beginning, before the inflammation has fully developed, it may sometimes succeed in abating the attack, but if it fail to accomplish this it had better be suspended, as it may aggravate the symptoms during the inflammatory stage. In other inflammatory affections of the genito-urinary mucus membrane, such as pyelitis and chronic cystitis, when the disease is of a subacute or chronic character, the liquor santal may be employed with great advantage. Santal Oil has been the remedy of some eminent surgeons in the treatment of gonorrhœa, but in combination with buchu and cubebs it is much more efficacious. The great difficulty in its administration was its suspension in mixtures, but this trouble is remedied by a beautiful pharmaceutical process, and our preparation will be found perfectly miscible in water.

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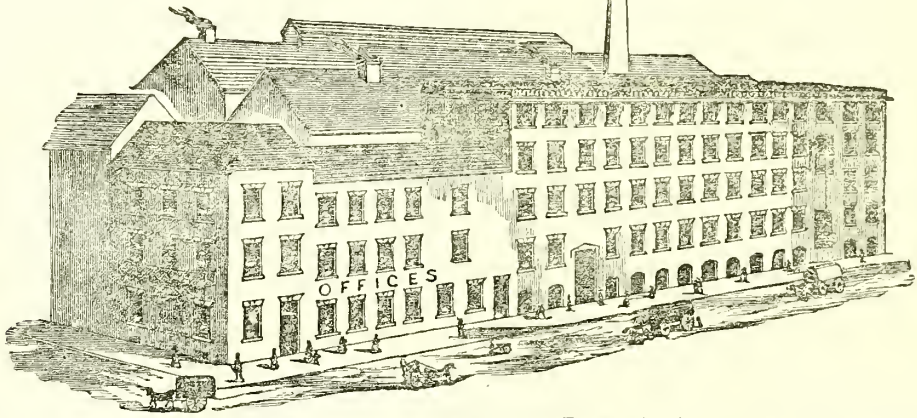
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MANUFACTURERS OF ALL DESCRIPTIONS OF PHARMACEUTICAL PREPARATIONS,
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Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.

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FOR DEAFNESS.

REGISTERED
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Exceedingly active Solutions of the Digestive Principles of the Pancreas and Stomach respectively. Dose, 3j to 3ij, diluted. (See Langleian Lectures, by Dr. W. ROBERTS, F.R.S.)

LIQUOR PANCREATICUS (BENGER), REGISTERED; and LIQUOR PEPTICUS (BENGER).

Full directions for medicinal use, and for the preparation of Peptonised Food accompany each bottle.

These Preparations may be obtained in 4, 8, and 16-oz. sealed bottles, through all the leading Wholesale Houses, or of the Manufacturers,

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Carefully purified from Arsenic, Copper, Silver, Tellurium, Selenium, and all contaminations. Dose: 3 j. diluted.

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Is a Pure Solution of Phosphorus, pleasant in flavour and appearance, being a perfectly Bright Liquor, combined with Vegetable Alkaloids, possessing marvellous Curative Properties, the Wonder of Modern Chemistry, free from all Dangerously Active Drugs; innocent in its action, and pronounced by the Highest Medical Authority to be unequalled for its power in replenishing and elaborating the Vitality of the Body; by its supplying all the essential constituents of the Blood, Brain, and Nerve Substance; and for developing all the Powers and Functions of the System to the highest degree, thereby checking all Wasting of the Vital Fluid, and the more Exhausting Wear and Tear of Life resulting from Over-taxed Energies of Body or Mind, maintaining that Buoyant Energy of the Brain, Nervous, and Muscular Systems, which renders the Mind Cheerful, Happy, Brilliant, and Energetic.

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Surpasses all the known therapeutic agents of the present age, for the Speedy and Permanent Cure of all Derangements of the Nervous and Blood Systems.

Nervous Prostrations, General Debility, Mental and Physical Depression, Incapacity for Study or Business, Noises in the Head and Ears, Loss of Energy and Appetite, Nervous Debility in all its Stages, Softening of the Brain, Paralysis, Pains in the Back, Affections of the Kidneys, Urinary Deposits, &c., Asthma, Scrofula, and Skin Diseases, Wasting or Withering of the Muscles, Impure and Impoverished Blood, Premature Decline, and all morbid conditions of the system dependent upon the deficiency of the Vital Forces arising from whatever cause.

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BULLOCK'S PEPSINA PORCI. DOSE— **2 to 4 grains.**
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May be prescribed with most substances compatible with Acids. In 4 oz., 8 oz., and 16 oz. Bottles, and in Bulk.

MESSRS. BULLOCK & CO. beg to direct attention to a paper on "Medicinal Pepsine and Artificial Digestion," in the *Practitioner* for March, 1880, by G. F. DOWDESWELL, Esq., B.A. (Cantab), F.C.S., F.L.S., &c. Upwards of 200 experiments made by the Author proved the great superiority of BULLOCK'S PEPSINA PORCI and ACID GLYCERINE OF PEPSINE over every other Pepsine or Preparation of Pepsine, English, French, German, American, and confirmed the equally favourable reports of Dr. PAVY (1863), Professor TUSON (1870), and the late Professor GARROD (1878), as to the eminent digestive value of Bullock's Pepsina Porci.

PEPSINE WINE, Bottles, 3/, 5/6, and 10/6.	PEPSINE PILLS, Containing 2, 3, or 4 grains.	PEPSINE LOZENGES, Boxes, 3/ and 5/6.	PEPSINE AND CHARCOAL LOZENGES Boxes, 2/6 and 4/6.
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ACID, CARBOLIC or Phenol Absolut.	Fine white hard crystals	Free from Cresylic Acid. Watery solution will not show greasy spots floating on top.
ACID, GALLIC	Almost white needles	Freely and entirely soluble in alcohol or water.
„ PYROGALLIC	Bi-sublimed, white, bulky	Ditto ditto ditto.
„ SALICYLIC (Kolbe's)	White, powder, crystallised, and dialysed	Dissolves colourless in water or alcohol; purest for medicine.
„ TANNIC	Lightest crystals	Dissolves almost colourless in water, alcohol, and ether.
„ „	Powder and granulated	Dissolves freely in water, alcohol, and ether.
CELLOIDINE (Patent)	Gelatine plates	Purest Pyroxylin; inexplusive.
CHLORAL HYDRATE	White cake and crystal	See Liebreich's, below.
CHLORAL HYDRATE (Liebreich's)	Transparent rhomboidals (facsimile of Dr. Liebreich's)	Will not decompose by age.
CHLOROFORM (ex Liebreich's Chloral)	Schering's original label	Free from foreign chlorides. Will leave no odour on evaporation.
CROTON CHLORAL	Shiny crystalline scales. (Powder form most objectionable)	Free from foreign chlorides.
GLYCERINE	S.G. 1260, double distilled, brilliantly white, odourless; also lower S.G. and qualities	Free from lime, chlorides, metals; will stand severest chemical tests.
IODINE	Resublimed, fine scales	Purest.
IODOFORM	Dry yellow scales	Purest, by medical reports.
POTASS, BROMIDE	Fine white dry regular crystals ...	Perfectly free from iodide, and the most free from chloride.
„ CAUSTIC	Lump and stick, white	Commercially pure, and pure by alcohol.
„ CYANIDE	Ditto ditto	30%, 45%, 60%, and 95%.
„ PERMANGANATE	Large and small crystals	Chemically pure.
„ IODIDE	Fine white dry regular crystals ...	Apply Barytic and other tests. This will never change colour.
SILVER, NITRATE	Fine large crystals	63 to 63½% pure silver.
SODA, CAUSTIC	Lump and stick, white	Chemically pure, and pure by alcohol.
SODA SALICYLATE, and other Salicylates	White powder and crystals	Freely soluble in water and alcohol.

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MANUFACTURER OF

ERGOTINE, pure Dialysed ...	Brown colloid, purified by Dialysis	Free from all saline matter present in the ordinary Ergotine and extracts.
FERRUM OXYD. (5% Dialysed)	Transparent brown liquid, purified by Dialysis	Free from all saline matter. Diluted by ten times its weight of water, will stand the test of Nitrate of Silver.
PEPSIN PORCI (100%)	White, sweet, odourless powder ...	Freely soluble in water, not hygroscopic, and will not deteriorate; will dissolve (by Wittstein's test) 100 parts of white of egg and 250 parts of fibrine.

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MANUFACTURER OF

POTASS, BICARBONATE	White powder and crystals	Dissolves bright in water.
SODA, BICARBONATE	Purest white powder, taste neutral, speciality for Soda powder	See tests P.B.
SODA, CARB. (purest)	Dry, for pure Soda Salts	Indifferent to Nitrate of Silver and Chloride of Barium.

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A. & M. ZIMMERMANN, 21 MINCING LANE, LONDON, E.C.

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THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was a deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

From SYMES & Co., Pharmaceutical Chemists, Medical Hall, Simla,
January 5, 1880.

To J. T. DAVENPORT, Esq., 33 Great Russell Street, Bloomsbury, London.

DEAR SIR,—Have the goodness to furnish us with your best quotations for Dr. J. Collis Browne's Chlorodyne, as, being large buyers, we would much prefer doing business with you direct than through the wholesale houses. We embrace this opportunity of congratulating you upon the wide-spread reputation this justly-esteemed medicine has earned for itself, not only in Hindostan, but all over the East. As a remedy of general utility, we much question whether a better is imported into the country, and we shall be glad to hear of its finding a place in every Anglo-Indian home. The other brands, we are happy to say, are now relegated to the native bazaars, and, judging from their sale, we fancy their sojourn there will be but evanescent. We could multiply instances *ad infinitum* of the extraordinary efficacy of Dr. Collis Browne's Chlorodyne in Diarrhoea and Dysentery, Spasms, Cramps, Neuralgia, the Vomiting of Pregnancy, and as a general sedative, that have occurred under our personal observation during many years. In Choleraic Diarrhoea, and even in the more terrible forms of Cholera itself, we have witnessed its surprisingly controlling power. We have never used any other form of this medicine than Collis Browne's, from a firm conviction that it is decidedly the best, and also from a sense of duty we owe to the profession and the public, as we are of opinion that the substitution of any other than Collis Browne's is a deliberate breach of faith on the part of the chemist to prescriber and patient alike.

We are, Sir, faithfully yours,

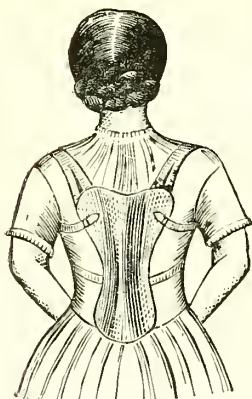
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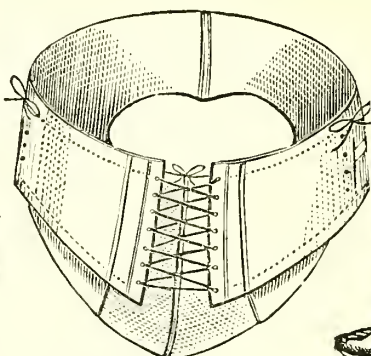
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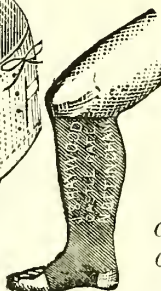
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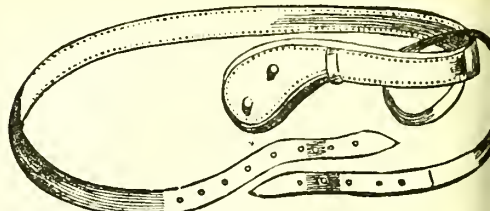
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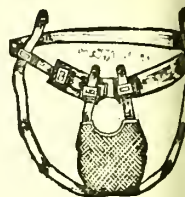


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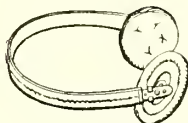


FIG. 1. Patent Single.

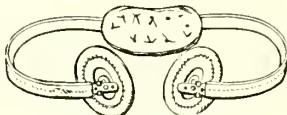


FIG. 2. Patent Double.

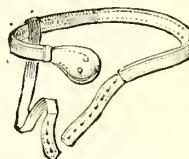


FIG. 3. Common Single.

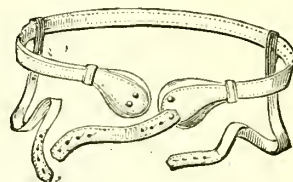


FIG. 4. Common Double.

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Patent Self-Adjusting Trusses, Basil and Chamois, per doz (Fig. 1), single	£1 10 0	Common Circular Trusses, Basil and Chamois ... per doz. (Fig. 3), single	£0 18 0
Ditto ditto Basil and MoleSkin ... " " "	1 18 0	Ditto ditto Basil and MoleSkin ... " (Fig. 4), double	1 4 0
Ditto ditto Roan and Skiver, Silk Sewn ... " " "	2 8 0	Ditto ditto Basil and Chamois ... " " "	1 18 0
Ditto ditto Basil and Chamois ... " (Fig. 2), double	3 0 0	Ditto ditto Basil and MoleSkin ... " each, single	0 3 0
Ditto ditto Basil and MoleSkin ... " " "	3 16 0	Scrotal Trusses, Basil and Chamois or MoleSkin ... " double	0 7 0
Ditto ditto Roan and Skiver, Silk Sewn ... " " "	4 16 0	Ditto ditto ditto ... " " "	

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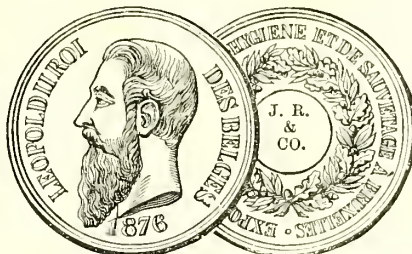
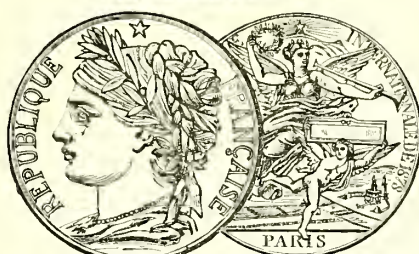
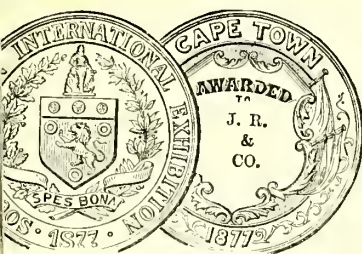
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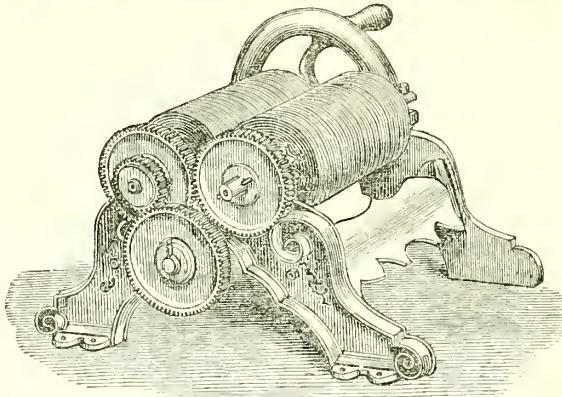
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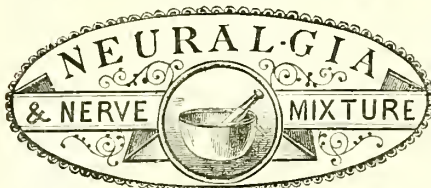
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" " No. 1.....	6/6	1/3
" " No. 2.....	6/	1/
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Chemists and Druggists selling "Holloway's Pills and Ointment" can, on application to the above address, or to the Wholesale House with whom they deal, be supplied free of charge with Handbills and Posters with their name and address printed at foot.

For Wholesale Terms see List of "Proprietary Articles" in most Price Currents.

INDEX TO ADVERTISEMENTS,

See Pages 25 & 26.

J. ROBBINS & CO.

METHYLENE

(BICHLORIDE).

Discovered to be a general Anæsthetic by Dr. RICHARDSON in 1867.

1-lb. Bottles, 16s.; 8-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.

COMPOUND ANÆSTHETIC ETHER,

For producing Local Anæsthesia.

In 4-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 7s.

OZONIC ETHER.

4-oz. and 16-oz. Stopped Bottles, 3s. 6d. and 12s.

PEROXIDE OF HYDROGEN.

First introduced as a Medicine by Dr. RICHARDSON.

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For promoting the Healing of Wounds by the first intention. In 2-oz. and 4-oz. Bottles, with brush, 2s. 6d. and 4s. 6d.; 16-oz., 12s.

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Containing pure Vegetable Ivory Charcoal. In Boxes, 2s. 6d. each.

OXFORD ST 372

SMITH'S TASTELESS DANDELION ANTIBILIOUS PILLS,

Price, 1s. 1½d. & 2s. 9d. per Box.

A NON-MERCURIAL LIVER MEDICINE, specially useful to the habitually constipated, and safe for all ages.

Worthy of trade notice. Reliable, and rapidly increasing in public acceptance.

PREPARED ONLY BY

W. F. SMITH, M.P.S.,
WALWORTH, LONDON.

To be had of the usual Houses.

THE "OTTO" SILENT GAS ENGINE.

NO BOILER OR STEAM NEEDED.

HIGHEST AWARDS AT SYDNEY AND MELBOURNE EXHIBITIONS.

Nearly 5,000 Ottos
now at Work.

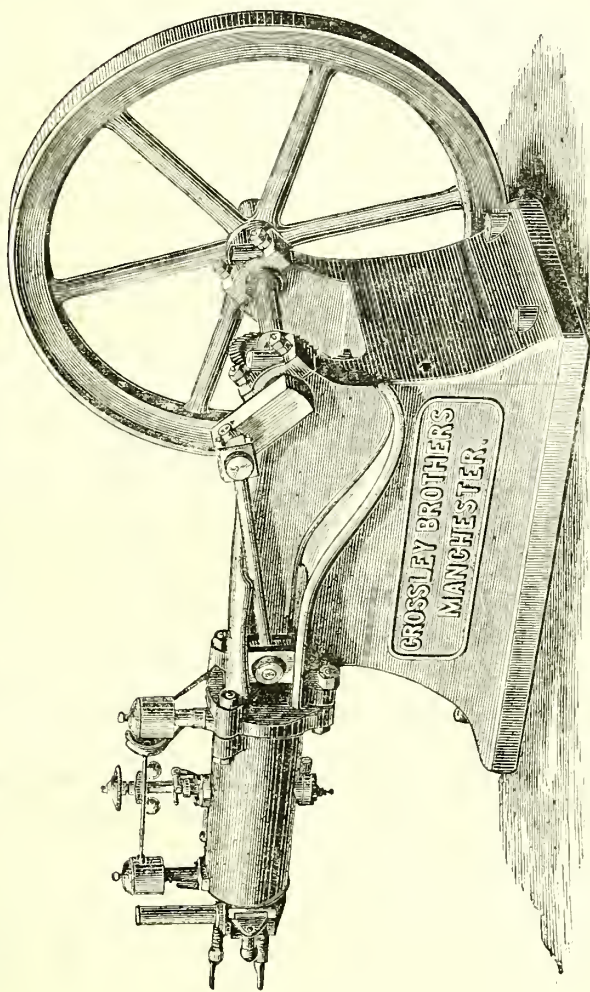
Nearly 5,000 Ottos
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Particularly suitable
for Aerated Water Work,
Drug Grinding,
Hoisting, &c.

Please write for
Special List of Engines
doing this Work,
and Testimonials.

LONDON HOUSE:
24 Poultry.

LIVERPOOL STORE ROOMS:
Basement, Corn Exchange.



1 H.P. and 16 H.P. type of Engine.

STARTS AT A MOMENT'S NOTICE.

SIZES {	Nominal Horse Power ...	1	2	3½	6	8	12	16
	Maximum Indicated Horse Power...	1.1	2.26	3.96	5.9	11.57	14.7	23.1	36 to 40

OFFERED.

ADVANTAGES AS
Compared with Steam.

- No Heat. No Danger.
- No Dirt. No Chimney.
- No Dust. No Smoke.
- No Extra Insurance.
- No Glands to Pack.
- No Safety Valves to Watch.
- Always Ready.
- Occupies little Space.
- Requires no constant attendance.
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CROSSLEY BROTHERS,

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AGENCIES WITH STOCK AT ALL PRINCIPAL COLONIAL PORTS.

TESTIMONIALS ON APPLICATION.

THE PATENT "BISSCHOP" GAS-ENGINE.

POWER.	PRICE. Carriage Extra.	Space Occupied.	Height.	Revolutions per minute.	Consumption of Gas per hour.	Approximate Cost of Gas per hour.
One Man	£25	2ft. 4in. x 2ft.	4ft.	100 to 140	12 cu. ft.	3d.
One and Half Man	£30	2ft. 4in. x 2ft.	4ft.	100 " 130	17 "	4d.
Two Man	£35	2ft. 9in. x 2ft.	4ft. 8 in.	90 " 120	21 "	5d.
Four Man	£50	4ft. x 2ft. 6in.	6ft.	80 " 90	28 "	1s.

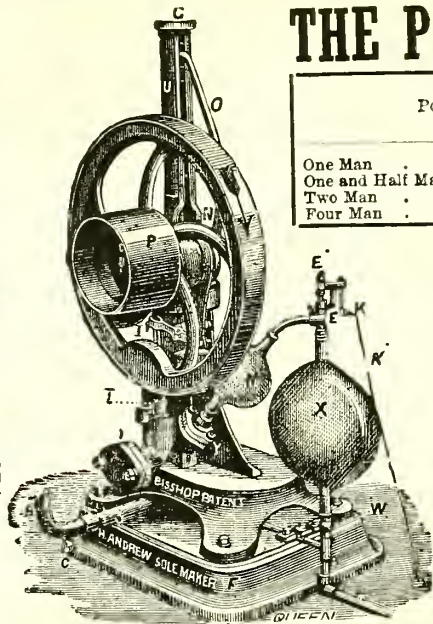
*The Simplest, the Most Economical, and the Most Efficient
Small Motive Power in Existence.*

**EXTENSIVELY IN USE FOR TURNING SODA
WATER MACHINES.**

*No Water. No Separate Meter. No Lubrication of the
Cylinder or Slide Valve. A Boy can Manage it.*

Average Weekly Sale - - 12 Engines.

J. E. H. ANDREW,
18 and 20 WATERLOO ROAD, STOCKPORT,
Sole Manufacturer for the United Kingdom.



VALLET'S PATENT.

Fig. 1.



Fig. 3.



New Stopper.

The Stoppers are made in six different sizes—Nos. 1, 2, 3, 4, 5, and 6. Nos. 4, 5, and 6 are most suitable for general use, the Bottles adapted to which having sufficient capacity in the mouth to allow a copious flow of the liquid, whilst Nos. 1, 2, and 3 are specially made for Bottles which have only a small mouth, thus retarding the flow of the liquid, and causing the evaporation of the carbonic acid gas before the Bottle can be emptied.

ROYALTY FREE.

**L. VALLET, 49 Everton Road,
LIVERPOOL.**

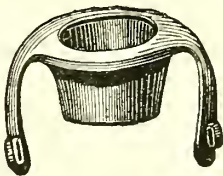
All Communications to be addressed to

Fig. 2.—THE STOPPERED AND FITTED BOTTLE.

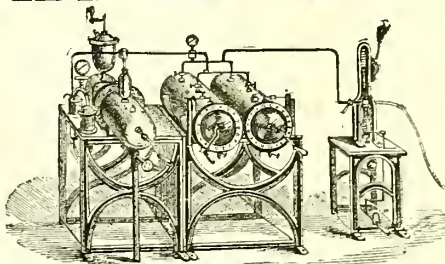


SODA-WATER MACHINERY.

PATENT NOZZLE



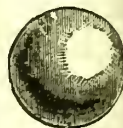
FITS ANY BOTTLE.



CONE STOPPER.



BALL STOPPER.



DAVENPORT'S NOZZLE AND STOPPER is the best Patent for utilising old Bottles, and converting them into Patents. No Corks or Wire, and saving entire cost in one season. The New Nickel-plated Nozzle makes this the most attractive Patent in use. Trial allowed. Prices lowered. Send for Samples. New Bottles ready fitted for use now supplied. Catalogues of Soda-Water Machines, Ice-Making Machines, Engines, Boilers, Copper Cylinders, Syphons, Seltzogenes, Filters, &c., and all accessories to the Soda-Water Trade.

AGENTS FOR HAYWARD TYLER & CO.'S SODA-WATER MACHINERY.
BARRETT & ELLERS' Patent Stoppers in Lamont's Bottles.

Illustrated Catalogues, of sixty-four pages, post free to all parts of the World.

DAVENPORT & CO., Soda-Water Machinists and General Machinery Agents,
99N HIGH HOLBORN, LONDON.

MELBOURNE EXHIBITION, 1881.

FIRST ORDER OF MERIT

AWARDED TO

HAYWARD TYLER & CO.,

FOR THEIR EXHIBIT OF

SODA WATER MACHINERY

84 & 85 WHITECROSS STREET, LONDON.



GOLD MEDAL,

SODA WATER MACHINERY.

MONDOLLOT'S PATENT.

The chief features of which are the entire suppression of the Gasometer and all its disadvantages, economy of materials, and saving of labour.

Notwithstanding the short time this Machine has been put before the Public, over 400 Machines are already in use all over the World.



PARIS, 1878.

No Gasometer.

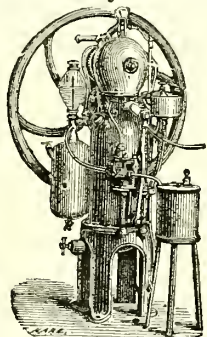
No danger of Explosion.

No skilled labour required.

No previous knowledge necessary.

Bottle and Syphon Filling Stand, Syphons, Syrup Pump, and all necessary Appliances. A New and Exhaustive Catalogue is now in the press, and will be sent, when ready, on application to

H. FAVARGER (Late MONDOLLOT) & CO., Limited,



No. 1 Machine, complete.
Prices from £25.

The Cheapest Machine.

The Most Compact.

The Most Simple to Work.

Being Entirely Automatical.

"When explained it is simplicity itself. . . . The fact of the economy of skilled labour and the saving of materials being the chief and most important points."
—The Mineral Water Trade Review and Guardian.

"There is no ordinary generator or gasometer in connection with this machine, and therein lies the secret of its advantage over the ordinary English Machines."
—The Mineral Water Trade Recorder and Advocate.

75 TURNMILL STREET, LONDON.
CLERKENWELL, E.C.,

SODA WATER MACHINERY

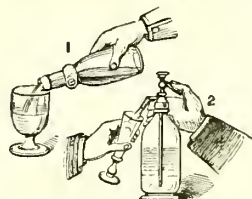
BY

BARNETT & FOSTER,

23rd FORSTON STREET, SHEPHERDESS WALK, LONDON, N.

Prize Medals—London, 1862, 1873, 1874; Paris, 1867, 1878; Vienna, Philadelphia, Cape, &c. Highest Award, Sydney, 1879-80.

Our Machines are universally adopted throughout the world for the manufacture of all kinds of Aërated Drinks, whether in bottles, syphons, or counter fountains. There are in England alone over 1 500 factories where our Machinery is in use. They are the simplest, safest, and cheapest for the purpose, and produce a highly-charged gaseous water free from metallic or foreign contamination.



All our Machines have a Gasometer, and it forms a most important necessity where purity of product is required, as in this the gas is expanded and purified; it also removes the possibility of explosion, and avoids the necessity of complication—these we consider of greater importance than the saving of a few inches of floor space.

Our valuable Book of Recipes and Instructions accompanies every Machine, and the most unskilled can at once produce Waters of the highest class.

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PATENTEES OF THE IMPROVED CORKING MACHINE FOR CHAMPAGNE BOTTLES.

ILLUSTRATED CATALOGUE FORWARDED FREE.

NOVELTIES IN BOTTLES AND STOPPERS.



THE
GLASS, EBONITE, PORCELAIN, &c.
DISC BOTTLE,

WITH NEW PATENT PURE RINGS,
SIMPLE, PERFECT, UNIQUE.

Likely to supersede all other Patent Bottles.



*The Disc effectually covers the rubber
when the bottle is filled.*

These Bottles and Ebonite and
Porcelain Discs can be supplied
at a cheaper rate than the
Prepared Glass, as No. 1.

THE SCREW STOPPER & BOTTLE,
For Ales, Porter, Cider, and
Brewed Beer.

The Screw Stoppers can be attached to the necks of
the Bottles by a band of wire and a small chain, if
preferred; price about 3s. 6d. extra. See Fig. 4.

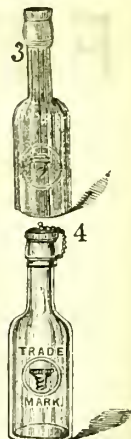
When bottling, the Stoppers must be wetted before
screwing them in. Screw it gently but firmly home.

They should not be subjected to the action of any
strong alkali, or great heat, and are not recommended
for stopping spirits at present.

Essential and Indispensable for every
Refreshment Room Proprietor, for every Hotel
and Public-house, and for every Householder.

Our other, and well-known Stoppers,
&c., still supplied as usual.

SAMPLES ON APPLICATION.



OUR ORIGINAL AND WELL-KNOWN
STOPPERS HAVE NOW BEEN
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UPWARDS OF 1,000



MINERAL WATER MANUFACTURERS
AND OTHERS THROUGHOUT
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AND THE WORLD.

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EUGENE GERAUT & CO.



SELTZOGENES.

First introduced by EUGENE GERAUT & Co. in 1853.

3-pint Size, Wire, 13/0; Cane, 13/6
5-pint " " 18/0; " 19/0
8-pint " " 30/0; " 32/0

Strongly silver-plated top, 5/ each extra.
3-pint size, strongly silver-plated, richly decorated porce-
lain stands, 30/ each; 5-pint size, ditto, ditto, 38/ each;
8-pint size, ditto, ditto, 48/ each.

Our well-known Seltzogenes are improved yearly, and have
already stood a public test of upwards of Twenty Years,
and are acknowledged as THE VERY BEST.

POWDERS FOR THE ABOVE:—3-pint, per dozen boxes, 22/;
5-pint, ditto, 36/; 8-pint, ditto, 65/.



SYPHONS.

Clear or coloured glass, pure ENGLISH
BLOCK TIN TOPS, with piston or cap.

22/6

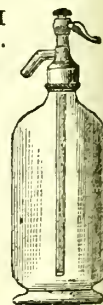
per dozen, for quantities of not less than
one gross.

25/ per dozen, for less than one gross.

Packing in Cask, 5/ per gross.

The Name marked on the metals free of charge for
quantities of not less than one gross.

The Name engraved with Trade Mark, from 1/6 to 2/6
per dozen extra.



LARGE DISCOUNT.

1 & 2 Corporation Buildings, Farringdon Road, London, E.C.

BOURNE WATER,

THE PUREST IN ENGLAND.

R. M. MILLS & CO.,

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Manufacture all kinds of AERATED WATERS from this Celebrated Artesian Spring.

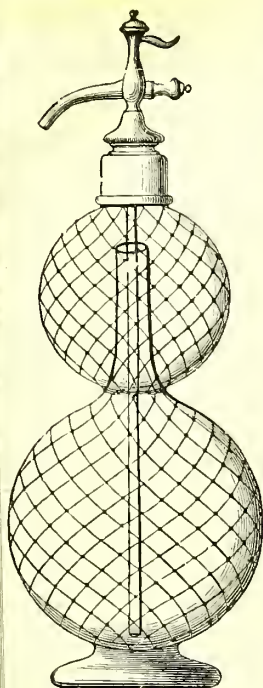
DR. ANDERSON'S AERATED "TISSUE PHOSPHATE" TONIC WATER,

An Aerated Tonic Beverage, containing all the Mineral Aliments of Nutrition, and assisting Digestion
in most marvellous degree.

Pure, Agreeable, Pleasing, and Invigorating Beverage, perfectly free from all Contamination.

Retail Price 4/6 and 8/ per doz Sold by their Agents throughout England. Price, with Descriptive Pamphlet, upon application.

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TRADE MARK.

D. Fèvre

REGISTERED.

CELEBRATED D. FÈVRE SELTZOGÈNES & POWDERS

For immediate production of Soda Water, Eau de Vichy,
Sparkling Lemonade, and Aerated Wines.

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Sole Inventor and Proprietor of the Article and Name "SELTZOGENE,"

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WHOLESALE PRICES.

Celebrated D. Fèvre Seltzogene.	{	3 pint, wire covered	12s. 0d. each.	} Liberal discount allowed.	
		3 pint, cane covered	... ..	12s. 6d. "	
		5 pint, wire covered	... ..	18s. 0d. "	
		5 pint, cane covered	... ..	19s. 0d. "	
		8 pint, wire covered	... ..	30s. 0d. "	
Case and Packing	... ..	12 Seltzogenes, 3 pint size	... ..	4s. 0d. net.	
"	"	12 "	5 "	5s. 8d. "	
"	"	6 "	8 "	9s. 8d. "	
Celebrated D. Fèvre Powders for the Seltzogenes.	{	3 pint, per doz. boxes of 12 charges,	24s. 0d.	} Liberal discount allowed.		
		5 "	"		36s. 0d.	
		8 "	"		60s. 0d.	
Pure Tartaric Acid and Bicarbonate of Soda in the highest state of perfection.	{	3 pint, per doz. boxes of 10 charges,	20s. 6d.	}		
		5 "	"		30s. 6d.	
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GOLD MEDAL,



SYDNEY, 1879.

HIGHEST AWARD,

THE MELBOURNE, 1880-1.

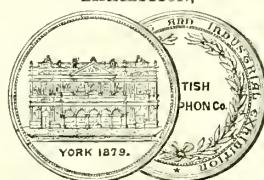
BRITISH SYPHON

MANUFACTORY,

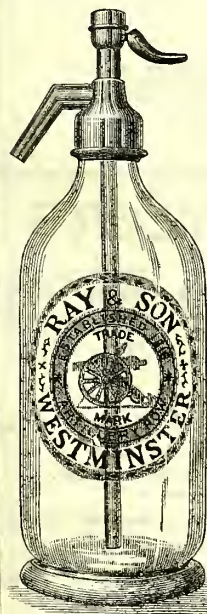
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SYPHONS.

SHORT LEVERS 22/6 } per doz.
LONG " 24/ } net.
White, Blue, Amber, or Green Bottles—
Cylindrical or Oval shaped.

Silver Plated from 8/ per doz. extra.

Name stamped on metal tops, free for
orders of one gross.

Name and Trade Mark en-
graved on the Bottles by the
Acid Process, from 1½d. to 2½d.
each extra.

Each Seltzogene and Syphon thoroughly tested before sent out.
ALL METAL WARRANTED FREE FROM LEAD.

SODA WATER MACHINERY.

NEW and IMPROVED CONTINUOUS APPARATUS,
with One or Two Pumps.

GENERATORS, WASHING VESSELS. GASOMETERS, ETC.

SYPHON FILLING MACHINES £5 10 0
SYRUP DOSING MACHINES 7 10 0
SYPHON FILLERS AND SYRUPERS COMBINED 10 15 0

ESTIMATES ON APPLICATION.

SELTZOGENES.

WIRE. CANE.
3 pint size.... 13/ 3 pint size.... 13/6
5 " 18/ 5 " 19/
8 " 30/

SILVER PLATED TOP, 5/ extra.

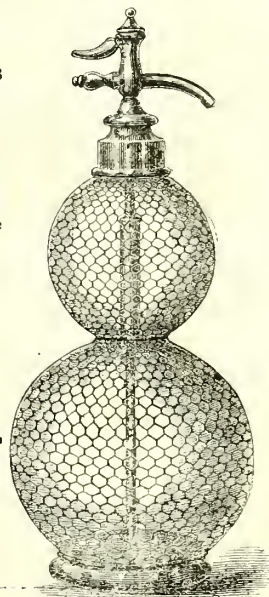
" WIRE, 5/ "

Drip Catchers of various patterns.

Liberal Discount for Quantities.

IMPORTANT.

In ordering Seltzogenes distinctly state
that you require the "LION
and SHIELD" brand, and see
that you get it, as all our ap-
paratus are stamped thus C-7
and guaranteed PERFECT
and of first-class workman-
ship.

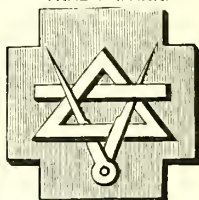


"VICTORIA" OFNER MINERAL BITTER-WATER.

THE BEST NATURAL APERIENT.

TRADE MARK.

As a safe, ordinary, and gentle aperient,
In inflammation and congestion,
In rheumatic and gouty disorders,
Against undue tendency to fat,
Against hæmorrhoids,
In bilious attacks and disorders of the liver,



During pregnancy and in many female diseases,
For habitual constipation,
In Organic Diseases resulting from fatty degeneration,
To remove the consequences resulting from excess in diet, &c.

The Proprietors of this Natural Spring of Laxative Water are desirous of bringing the leading features before the Medical Profession. The advantages specially claimed are, that it contains a larger amount of valuable active aperient solids than any other bitter water previously in vogue with the public, or prescribed by the faculty, and notwithstanding its rapid action as an aperient, it produces no uneasiness in its effects. It will be seen from the analytical data (below) of eminent Professional Chemists of England and the Continent, that this water contains nearly double the amount of Magnesia found in any other Bitter Water, hence it is entitled to be distinguished as a "SPECIFIC MAGNESIUM BITTER WATER."

	Analysis of Prof. H. E. ROSCOE, F.R.S., Owens College, Manchester.	Special Analysis of Prof. M. BALLO, Chemist of the City of Budapest.	Analysis of Dr. G. L. ULEX, Official Chemist of the City of Hamburg.
MAGNESIUM SULPHATE ..	32.8107	32.3800	33.60
SODIUM SULPHATE ..	17.1693	20.9540	19.55
POTASSIUM SULPHATE ..	0.4407	0.3105	1.28
CALCIUM SULPHATE ..	2.3304	1.6020	1.33
SODIUM CHLORIDE ..	1.7708	2.2431	2.28
SODIUM CARBONATE ..	1.1884	0.4980	2.10
ALUMINA ..	0.0103	0.0229	0.3
SILICA ..	0.0587	0.0444	0.6
PHOSPHORIC ACID ..	Trace	Trace	Trace
SUMMARY OF TOTAL SOLUBLE CONSTITUENTS ..	55.1798	58.0549	60.23
Do. Do. FOUND ..	55.7250	58.156	
DIRECTLY ..			
SPECIFIC GRAVITY AT 17°C. ..	1.0534 AT 17°R.	1.05362 AT 14°R.	1.055

Soluble Constituents and Sulphate of Magnesia in
"Victoria Bitter Water," as compared with
other Mineral Waters.

	Soluble Constituents.	Sulphate of Magnesia.
VICTORIA Bitter Water	55.77	32.87
Rákóczy	53.53	23.06
Franz Josef	52.29	24.78
Hunyady László	51.07	24.20
Hunyady János	41.73	18.44
Königsbitterquelle ..	37.55	18.63
Elisabeth	26.29	8.04
Püllnaer Bitterwasser ..	32.72	12.12
Friedrichshaller	25.29	5.15
Saidschütz	23.21	10.96

Retail Prices:—Litres, 1/6 per bottle; Half-Litres, 1/- per bottle.

Cases are free and contain either 25 Litre Bottles or 50 Half-litre Bottles. May be obtained of any Chemist or Patent Medicine Vendor in the United Kingdom.

THE "VICTORIA" NATURAL BITTERWASSER OF BUDAPEST, HUNGARY.

Wholesale Depot for England and Colonies:—92 & 93 Great Russell Street (corner of Charlotte Street), London, W.C.

FOREIGN MINERAL WATERS.

FOREIGN LIQUEURS.

FOREIGN WINES.

FOREIGN SPIRITS OF EVERY DESCRIPTION.

ANGOSTURA BITTERS.

APPLY TO

JAMES SMITH & COMPANY, IMPORTERS,

LIVERPOOL: 9 LORD STREET.

"ABSOLUTELY PURE."

SEE ANALYSIS. Sent post free on application.

ELLIS'S



REGISTERED.

RUTHIN
WATERS.

Soda, Potash,
Seltzer, Lemon-
ade, also Water
without Alkali.
For GOUT,
Lithia Water, &
Lithia &
Potash Water.

CORKS BRANDED "R. ELLIS & SON, RUTHIN," and every
label bears their Trade Mark. Sold everywhere, and wholesale of

R. ELLIS & SON, RUTHIN, NORTH WALES.

London Agents: W. BEST & SONS, Henrietta St., Cavendish Square.

T. & F. J. TAYLOR'S



AËRATED WATERS,

Newport Pagnel.

ESTABLISHED 1835.

SODA, POTASH, SELTZER, AËRATED (without
Alkali), and LITHIA WATERS,
LEMONADE AND GINGER ALE.

Each Bottle is protected by a Label bearing the Signature
of the Firm.

Purity and Excellence of the Water certified by Analysis
by Professor ATTFIELD, Ph.D., F.C.S.

WILCOCKS' "ORIGINAL" SODA WATER MACHINE

(HAND POWER),

To make 100 Dozen per Day of highly-charged Gaseous Water,

£22 : 10 : 0

This Machine is on the continuous-process Bramah principle, has a good size Lead Generator, Copper Gas Holder in oak tub, with internal pipes of block tin; Bramah principle Gun-metal Pump in a frame of iron, with Fly-wheel, Crank, and Handles. *Instead of the Gun-metal Cylinder or Condenser, with revolving Agitator and Toothed Gear-wheels, we substitute in this Machine a large Copper Condenser of about four times the size, with our Apparatus fitted to the Copper Condenser.* We find the Waters are more highly charged with Carbonic Acid Gas by this method than any other way of saturation, and they are perfectly free from metallic contamination. This Machine is also strongly recommended for filling Syphon Bottles, and, if driven by a Motor (either a Gas, Air, Steam, or Water) Engine, the product is about double.

Wilcocks' "Original" Soda Water Machine, to make 100 dozen per day by hand power, with Dial and Water Gauges, Lead Generator, and Copper Gasometer **£22 : 10 : 0**

Packed for Export in extra-strong Iron-bound Cross Battened Packing Case, **£3.**

"Middlesex" Lever Corking & Filling Machine, for Corked Bottles **£5 : 0 : 0**

Wilcocks' "Eclipse" Filling Machine, for filling the various *Patent* Internal Stopper Bottles **£4 : 10 : 0**

Wilcocks' Syphon Filling Machine, for filling Syphons **£4 : 10 : 0**

Packing Case for each Filling Machine, separately, **£1 5s. each.**

If all three in one Case, **£2.**

Printed Testimonials and Illustrated Price List on application.

N. G. WILCOCKS, BACK STREET, BATH.

THE GREAT SUCCESS.

F. BIRD'S CHAMPAGNE FRUIT POWDER

For making **FRUIT CHAMPAGNE.** Sparkling and Effervescing. Marvellously cheap. An ordinary large champagne bottle will cost 1d., and half-pint bottles 3½d. per dozen. Retail at 4d. Directions on each Packet.

Constantly used by Mrs. Wallace Gothard (Professor of Cookery and Domestic Economy) at the Alexandra Palace.

F. BIRD'S DELICIOUS RASPBERRY BEER POWDER

Produces **RASPBERRY BEER** clear, bright, and sparkling.

F. BIRD'S LEMON BEER POWDER, for making **LEMON BEER.**

F. BIRD'S GINGER BEER and POP POWDER, for producing this popular beverage quicker and better than by any other method known. Prices 27s. and 36s. per gross; also in 3 and 6 doz. Boxes. N.B.—Specially packed for exportation.

Prepared only by F. BIRD, Chemist, COVENTRY.

WHOLESALE LONDON DEPOT—223 UPPER THAMES STREET.

BARCLAY, NEWBERRY, SUTTON, HARVEY, SHEPHERD & CO., London; HARRIS, Birmingham; EVANS, Liverpool, and all Patent Medicine Houses. See Testimonials, &c., and Bills.

THE CONDY'S FLUID CO.,

7 Falcon Street, London.

BEWARE OF MEAN AND ACTIONABLY FRAUDULENT IMITATIONS OF OUR FIRM AND GENUINE PRIZE MEDAL LABELS, WITH FICTITIOUS ADDRESSES.

NEW (1881) SEASON'S FINEST QUALITY NORWEGIAN COD LIVER OIL

Specially Prepared and Filtered in the Cold.

NOW ON SALE. LOW QUOTATIONS ON APPLICATION.

T. J. SMITH, 10 & 11 NORTH CHURCH SIDE, HULL, Importer.

PURVEYOR TO THE BROMPTON CONSUMPTION HOSPITAL, &c., &c.

CHEMISTS' AERATED AND MINERAL WATERS ASSOCIATION, LIMITED,

SPARKLING RUBINE

CONTAINS NO ALCOHOL, NO IRON, NO PHOSPHORUS.

SPARKLING RUBINE is a delicious effervescent beverage, and a really fine tonic and stimulant; is extremely palatable; is stimulating, though non-intoxicating.

SPARKLING RUBINE contains all the active principles of the Red Clinchona or Peruvian Bark, judiciously combined with tasteful and stomachic ingredients, yet, although it contains quinine, will not produce headache.

SPARKLING RUBINE is therefore a combination of great value, and recommended as such by the medical profession. It is an absolutely innocuous "Pick-me-up," which may be taken between meals as well as with them.

SPARKLING RUBINE

Dr. T. Stretch Dowse, in his celebrated paper on "Brain and Nerve Exhaustion," read before the Medical Society of London, makes special note that Sparkling Rubine is a pleasant and agreeable medicated tonic, and may be judiciously taken at any period of life.

Of Chemists, $\frac{1}{2}$ 6d, and 8s. per doz., in champagne bottles.

OPINIONS OF THE MEDICAL PROFESSION, PRESS, &c.—The late Dr. KENNON, of Harrogate, author of "Observations on the Medicinal Springs of Harrogate": "The value of the Spring is very great in cases where the combination of an Aperient with iron is a desideratum; acts powerfully on the secretions and excretions, by virtue of saline impregnation, and at the same time enriches the blood, and strengthens the constitution by means of the iron." See also Dr. PIGOTT in his "Harrogate Spas," &c., &c. Favourable notices have been given by the *Medical Press and Circular*, *Medical Times and Gazette*, *Court Circular*, &c., &c.

HARROGATE KISSENGEN purifies the blood: at the same time supplies it with the salts needed to health. HARROGATE KISSENGEN taken *cognitum* is purgative. HARROGATE KISSENGEN, unlike most aperients, never produces constipation as an after effect. According to Prof. ATFIELD's analysis in September, 1873, the water contains Chlorides of Sodium, Calcium, Magnesium, Potassium, Strontium, and Ammonium; Carbonates of Iron, Calcium, and Barium; Sulphate of Barium, Silica, and traces of Bromides, Iodides, and Lithium; Carbonic Acid, Oxygen, and Nitrogen Gases.

THE ONLY SALINE CHALYBEATE WATER IN GREAT BRITAIN, untravelling by any foreign water, and possessing the unique qualities of being at once A MILD APERIENT AND AN EFFECTIVE TONIC, is consequently the best alternative imaginable.

AERATED, bottled at the source, Harrogate, Yorks, and doubly charged at the Spring with its natural gas, as recommended by Prof. ATFIELD, F.R.S., F.C.S., &c.

KISSENGEN (HARROGATE)

THE MOST PALATABLE WATER EXTANT.

Offices and Factories—45 Gifford Street, and 112 Pembroke Street, Caledonian Road, London; and Harrogate.

GOUGH'S GOOD TEMPLAR SPARKLING CHAMPAGNE.

18s. per Dozen Bottles;

22s. per Two Dozen Half Bottles.

Duty paid in London, or f.o.b. Export Ship there.

I have appointed CHARLES KINLOCH & CO., Backchurch Lane, London, E., SOLE AGENTS for England, Germany, France, Italy, Russia, the English Colonies, and America, for the Sale of my Wine.

JULES DELARUE,

Maruil-sur-Ay, France.

ALL ORDERS MUST BE SENT DIRECT TO MY AGENTS.

C. KINLOCH & CO.'S WHOLESALE LIST OF WINES AND SPIRITS ON APPLICATION.

ZOEDONE.

TRADE PRICES: 5/ per dozen small bottles; 9/6 per dozen large bottles.

TERMS: 5 per cent. for Cash with the Order, or 2½ per cent. Quarterly Account.

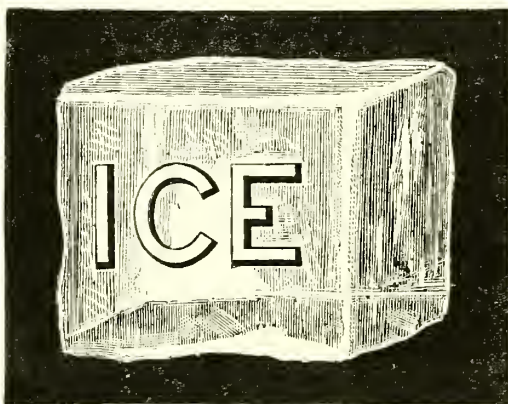
Agents:—INGRAM & ROYLE,
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FOREIGN

Mineral Waters and Zoedone.

FREDERICKSHALL (5 Cases, 5/ per Case
1 case), 24/6 Case, 30 bot.; 34/ Case, 50 ½-bts.
APOLLINARIS (10 Hprs., 1/- and 1½ less),
24/ Case, 50 bot.; 36/6 Hprs., 100 ½-bts.
Hampers free.
HUNYADI JANOS (10 Cases, 3/- and 5/- less),
30/- Case, 25 bts.; 50/- Case, 50 ½-bts.
SELTZER ... 11/- Hpr., 25 bts.
... 15/- Hpr., 50 ½-bts.
PULLNA ... 14/- Case, 20 bts.
... 30/- Case, 50 ½-bts.
VICHY ... 31/- " 50 bts.
... 37/- " 50 ½-bts.
CARLSBAD ... 37/- " 50 bts.
KISSENGEN ... 42/6 " 50 "
SCHWALLBACH ... 27/6 " 50 "
HOMBURG ... 37/6 " 50 "
WILDUNGEN ... 40/- " 50 "
CARLSBAD SALTS, ½-Bots., 20/- per doz.;
½-Bots., 40/- per doz.; Bot., 50/- per doz.
ZOEDONE, 5/- per doz., 6-doz. Cases (if
5 Cases, 27/-, 10 Cases, 37/-, 20 Cases, 47/- per
doz. less).



REGISTERED AT STATIONERS' HALL.

Norway Block Ice.

ORIGINAL BLOCKS ... 1/9 per cwt.
1 cwt. to 2 cwt. ... 2/6 "
½ cwt. to 1 cwt. ... 4d. per lb.
Under ½ cwt. ... 1d. "

Packing and Mats for Original Blocks free
3d. each allowed for Mats if returned.
Present Season's Ice specially fine and extra
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taken from vessels while discharging.

PRINTED DIRECTIONS for STORING
ICE sent free on application.

W. B. HARRISON,
IMPORTER OF ICE AND
MINERAL WATERS,
6 Bridge Street, Sunderland.

JEWSBURY & BROWN'S MANCHESTER MINERAL WATERS,

PURE SODA, SELTZER, POTASH, LITHIA, &c.,
LEMONADE,
GINGER ALE, AND QUININE TONIC.

Prepared and Bottled specially for Export, and warranted to keep well.

Manufactured with the utmost care and by improved machinery, these productions are recommended for purity and excellence of quality by many leading members of the Medical Profession, and have for many years had a preference by the public; the flavour of the Lemonade and Ginger Ale being procured from the fresh Fruit and Finest Jamaica Ginger, they may be relied upon as furnishing delicious and satisfactory beverages, either for general use or specially for invalids.

The Soda Water is absolutely free from any metallic impregnation, and being by improved machinery highly charged with Carbonic Acid Gas, and each bottle containing a definite and unvarying proportion of Pure Carbonate of Soda, J. & B. have every confidence in inviting a trial from those who have not already patronised them.

The Seltzer, Potash, and Lithia Waters are prepared with the utmost exactitude and the purest ingredients.

The New Quinine Tonic furnishes a pleasant form for the administration of a most valuable restorative, and is refreshing and agreeable.

Ginger Ale (Aromatic) of superior quality, and strongly recommended as a Non-Alcoholic and warm stimulant beverage.

N.B.—Every Bottle is protected by a distinctive Label, with Name and Trade Mark, and each Cork is branded.

Counter Bills and Analytical Reports, with Agents' Names and Addresses, supplied when requested.

JEWSBURY & BROWN, 44 Downing Street, 3 Grosvenor Street, and 113 Market Street, MANCHESTER.

A CERTIFICATE OF MERIT, for superiority of quality, was awarded to Jewsbury & Brown at the Exhibition of Sanitary Appliances, at Owens College, Manchester, on the occasion of the Meeting of the British Medical Association, August, 1877.

A CERTIFICATE OF MERIT awarded by the British Sanitary Institute of Great Britain, after a deferred PRACTICAL TRIAL AND EXAMINATION, July 4th, 1879.

ZOEDONE

A DELICIOUS BEVERAGE.

The BRITISH MEDICAL JOURNAL says:—

"We can confidently recommend it to the attention of physicians and others who are occasionally at a loss what to direct their patients to take when parched by feverish thirst or depressed by exhausting ailments—notably in cases where alcoholic stimulants would be prejudicial. We feel that it would be found exceedingly useful in mitigating the discomfort oftentimes experienced by those suffering from the thirst, loss of appetite, and general *malaise* connected with the last stage of phthisis and chronic bronchitis. We would also, from our observations and experience, advise its introduction into clubs, taverns, and places of public amusement, where it would judiciously supersede vinous and alcoholic stimulants, seeing that it contains, as its name implies, life-giving ingredients in a form easily assimilated."

A BRAIN AND NERVE TONIC.

The LANCET says:—"ZOEDONE contains the soluble phosphates of lime, iron, soda, and potash, in medicinal quantities. Very efficient and pleasant."

The MEDICAL PRESS AND CIRCULAR says:—"Is commendable equally for the style in which it is put up and the delicate flavour which it possesses, and also on account of its special merits as a nerve tonic."

NON-ALCOHOLIC.—STIMULATES BY STRENGTHENING.

CAUTION.—Dealers should be on their guard against numerous imitations of ZOEDONE, put up in the same style and offered as substantially the same article. The composition of ZOEDONE is protected by Letters Patent, and the Zoedone Company will proceed against infringements.

Every Chemist that has introduced ZOEDONE has found a large and regularly increasing sale for it. It is put up in Champagne Bottles, and there is no trouble with empties, as the bottles are included in the price. Customers supplied with Pamphlets for distribution; also a special Circular for medical men stating the formula.

ZOEDONE is admirably adapted for hot climates.

ZOEDONE is supplied on the following Terms, Cash Prices, free on Rails at Wrexham:—

SMALL Champagnes,		6/6 per dozen (EXPORT,	7/0 per dozen),	in 6 dozen cases.	} Bottles and Packages included.
"	"	6/8	"	7/2	
"	"	6/9	"	7/3	
"	"	6/10	"	7/4	
"	"	12/0	"	13/0	
LARGE		12/6	"	13/6	}
"	"	"	"	"	

Application for Trade Terms should be accompanied by Business Card.

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ABERDEEN—W. Paterson & Sons.

BELFAST—Grattan & Co.
BERWICK—W. Graham, Carr & Son.
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BRADFORD—Harrison, Parkinson & Co.
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KENDAL—Severs & Bateson.
LANCASTER—W. H. Bagnall & Co.
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LEICESTER—John Richardson & Co.
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" Evans, Sons & Co.
" Raimes & Co.
" R. Sumner & Co.
" Clay & Abraham.
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MANCHESTER—James Woolley, Sons & Co.
NEWCASTLE-ON-TYNE—Brady & Martin.
NICE—J. Daniel.
NORTHAMPTON—Frederick Kirby.
PARIS—Hogg, 2 Rue Castiglione.
SOUTHAMPTON—Randall, Sloper & Co.
YORK—Henry J. Pratt.

Retail Agents whose names are not on the published list should communicate with the Manager.

PATENTEE—DAVID JOHNSON, F.C.S. MANAGER—JOHN MOSS, F.I.C., F.C.S.

Manufacturers—THE ZOEDONE COMPANY (Lim.), Wrexham, North Wales.

LONDON OFFICE: 25 ABCHURCH LANE, E.C.
ZOEDONE BUREAU FOR FRANCE: 7 RUE ROYALE, PARIS. ZOEDONE BUREAU FOR BELGIUM: 2 RUE DE LOXUM, BRUSSELS.

NOTE.—ALL orders for the Company must be sent to Wrexham.

Hunyadi János

CAUTION.—Circumstances which have come to the knowledge of Andreas Saxlehner, Buda Pest, Sole Proprietor of the Hunyadi János, Spring, compel him to WARN the British Public against SPURIOUS IMITATIONS. To secure genuineness, purchasers should see that every bottle has on the LABEL the name of "THE APOLLINARIS COMPANY (LIMITED), London."

FOR SUMMER.

RASPBERRY
STRAWBERRY
LIME FRUIT
BLACK CURRANT
LEMON, ORANGE
JACONELLE PEAR
PINE APPLE

In Bottles, 1/9,
Half Bottles, 1/-



FOR WINTER.

AROMATIC
BLACK CURRANT
GINGERETTE
GINGER LEMON
PEPPERMINT
CLOVE
WINTER PUNCH
LIME FRUIT
CORDIAL

In Bottles, 1/9,
Half Bottles, 1/-

By the simple addition of two table-spoonfuls of these Syrups to a tumblerful of hot or cold water, most wholesome and refreshing drinks are immediately prepared, as pleasant to the taste as they are invigorating to the system. For Gazogenes and the Syphon Soda Water Bottles they are admirably adapted. Put into a tumbler a large spoonful of any of the Syrups, and fill it up with the Gaseous Water. Largely used for flavouring Puddings, Jellies, Custards, and Blanc-Mange, and are specially suitable for the Sick Room, Pic-nics, Weddings, Christmas and Birthday Parties, &c., &c.

Sole Manufacturer—W. BECKETT, Heywood, MANCHESTER.

Wholesale Agents—Barclay & Sons; Sanger & Sons; Edwards & Sons; Sutton & Co., &c., &c.

BRATBY & HINCHLIFFE,

AERATED WATER ENGINEERS AND VALUERS,

Wish to inform Chemists and others, who contemplate manufacturing their own Aërated Waters, that they supply and fix complete any size or kind of **SODA-WATER PLANT**, to make from 100 to 2,000 dozen per day, and give practical instructions how to manufacture the different kinds of beverages of first-class quality.

Every requisite for the Trade supplied and kept in stock ready for immediate delivery. Engines and Boilers combined or separate, Boxes, Patent or Ordinary Bottles, &c., &c.

BOTTLING MACHINES.

SOLE AGENTS FOR THE "RAPID PARAGON TURNOVER FILLING MACHINE," FILLS ALL PATENT BOTTLES.

A large quantity of second-hand Machinery and Appliances always on stock.

For particulars see our Monthly List and Circulars, which are sent post free on application.

POTT ST., ANCOATS, MANCHESTER.

BINGLEY'S



ANALYSED

MANUFACTURED BY

JOHN BINGLEY, Pharmaceutical Chemist,

NORTHAMPTON.

A copy of Professor Atfield's Report will be forwarded by post on application.

SODA WATER.

SELTZER.

POTASH.

LEMONADE.

LITHIA, &c.

Caution

W. A. ROSS, the Original Patentee and Maker of The Celebrated Belfast Ginger Ale, cautions the Public that the "GENUINE" can only be had at

Ross's Royal Ginger Ale
AND
Aerated Water Works Belfast.

NAME ON CORK, CAPSULE, AND LABEL REGISTERED.

EXPORT ORDERS HAVE SPECIAL ATTENTION.

AWARDED THE CERTIFICATE OF MERIT AT THE SANITARY EXHIBITION OF GREAT BRITAIN.

A SIX DOZEN CASE, which may be assorted, to any Railway Station for 36s., returned Empty allowed 18s.

A Liberal Discount to the Trade, who should send for Sample Case before ordering elsewhere.



Telegram from Melbourne Exhibition, May 7, 1881.

To Messrs. Samuel Gulliver & Co., Aylesbury.

"TWO FIRST-CLASS AWARDS for your Exhibit, being the Highest Honours obtainable for Mineral Waters. Special reference being made to the Good Quality."

Also Two Second Awards and Honourable Mention—Five Honours in all.

NEW AND IMPORTANT DISCOVERY.

GINGER ALE

FROM PURE JAMAICA GINGER.

The difficulty of using Ginger in the Manufacture of "Ginger Ale," and at the same time having a CLEAR and SPARKLING DRINK, has, after much labour and expense, been thoroughly overcome by

Messrs. HARSTON & CO., of LEEDS,

And they are now able to place before the public a BRIGHT and SPARKLING DRINK, made purely from genuine Ginger Root.



THE ROYAL YORKSHIRE GINGER ALE,
From Pure Jamaica Ginger. Has wonderful nourishing properties.

THE ROYAL YORKSHIRE GINGER ALE,
From Pure Jamaica Ginger. Restores circulation; is warm and comforting.

THE ROYAL YORKSHIRE GINGER ALE
From Pure Jamaica Ginger. Is Non-intoxicating.

THE ROYAL YORKSHIRE GINGER ALE
From Pure Jamaica Ginger. For railway travelling, driving, or exposure to cold.

ABSOLUTELY PURE.

See Analysis by Drs. A. H. HASSALL, M.D., and OTTO HEHNER, F.C.S.

J. H. CUFF'S MINERAL WATERS, Atkinson St., Deansgate, MANCHESTER.

ESTABLISHED IN 1801.

SODA WATER (ordinary)

SODA WATER B.P.

SELTZER WATER

LITHIA WATER

POTASS WATER

15 grs., 20 grs., & 30 grs.

(each half-pint)

LITHIA WITH POTASS WATER, &c., &c.,

Supplied in ordinary and half-sized bottles and in syphons.

Cuff's Waters are prepared expressly for a High-class
Family Trade.

PRICES MOST REASONABLE.

LIST FREE ON APPLICATION.

CARRIAGE PAID ON FULL GOODS
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Cuff's Waters give universal satisfaction to Dealers and
Consumers alike. Try them!

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GINGER ALE

GINGER BEER

AERATED WATER

without alkali

QUININE TONIC

WATER

HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER

(GUARANTEED PURE AND FREE FROM CAPSICUM)

TRADE PRICE, 5s. per lb.; 12 lbs. and upwards, 4s. 6d.

Highly adapted for the manufacture of *Transparent Aërated Waters*, and
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HONOURABLE MENTION,
INTERNATIONAL FOOD EXHIBITION,
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"DEAR SIR,—I think you should make it generally known that your
Essence, in water, is the very best vehicle possible for Cod Liver Oil. It
conceals its flavour, prevents nausea and eructations, and aids its digestion.

"DANIEL HOOPER, M.D."

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"DEAR SIR,—I have pleasure in testifying to the excellence of your
Soluble Essence of Jamaica Ginger. You have fully overcome the difficulty
usually experienced in preserving ginger in combination and in solution
with iron tonic mixtures.

EDWARD HAUGHTON, M.D."



THE COMPOUND ESSENCE

(GUARANTEED PURE AND FREE FROM CAPSICUM).

This Essence imparts with the GINGER a PECULIARLY FINE FRUITY
FLAVOUR and AROMA.

TRADE PRICE, 5s. 6d. per lb.; 12 lbs. and upwards, 5s.

THE COMPOUND FORTIFIED ESSENCE

Specially adapted for the Manufacture of the FINEST

GINGER ALE.

This Essence imparts the fullest amount of PUNGENCY with the FINE
GINGER AROMA and FRUITY FLAVOURS of the LAST-MENTIONED
ESSENCE.

TRADE PRICE, 5s. 6d. per lb.; 12 lbs. and upwards, 5s.

HAY'S GINGER ALE ESSENCE

HIGHLY CONCENTRATED.

This Essence is a complete Bouquet of the finest Ginger, Lemon, and other
flavours, in a highly concentrated state.

TRADE PRICE, 9s. per lb.; 12 lbs. and upwards, 8s. 6d.

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Supplies Pungency, Aroma, Colouring and
Flavouring.

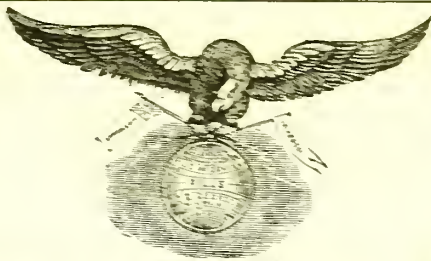
Price 4s. 6d. per lb.; 12 lbs. and upwards, 4s.

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W. HAY, MANUFACTURING CHEMIST,
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A Safe, Certain, and Speedy Cure for Piles and Gravel. This Remedy may be had in the following forms:

- NO. 1. GEORGE'S PILE AND GRAVEL PILLS.
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- NO. 3. GEORGE'S PILLS FOR THE PILES.

In Boxes, 10, 20, and 30 each. Wholesale Agents, all the Foreign Medicine Houses and Wholesale Chemists. Write to the "Pile & Gravel Pills," is Copyright.

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TOILET BRUSHES AND COMBS.

The "Perfect" Tooth Brush, "B" "C" 53 per doz.

The "Dent" "E" "F" quality 50 per doz.

The "Grip" Tooth Brush, ditto, ditto 50 per doz.

Best Badger Tooth Brush, ditto, ditto 69 per doz.

Hair, Nail, and Shaving Brushes, all kinds, at very lowest prices.

TERMS:—25 per cent. cash with order, or monthly account net.

N.B.—Please Address all Orders as above.

THE BEST BRACK BRITISH AND OTHER VERMONT BRACKETS.



CHLORIDE OF LIME,

IN WATERPROOF, AIRTIGHT, & ODOURLESS PACKAGES.

Protected by Royal Letters Patent.

Is best and cleanest and convenient for use. Being airtight and odourless, retains its strength unimpaired.

It is admirably adapted for Export, and will keep for years in any climate.

In 14-lb., 28-lb., and 56-lb. Packages, packed into 14-lb. Boxes and 28-lb. Cases, each separately, or the three sizes assorted in each Box or Case. Family Packages, in 1-gross Boxes, also into 1-gal. and 2-gal. Cases, to meet the requirements of the Export Trade and large buyers.

Packed also in 1-lb., 5-lb., 10-lb., 25-lb., and 50-lb. Cases, and Cases to order.

The Wholesale Trade and Shippers only supplied, and a Liberal Discount given. Samples and Terms on application.

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NATIONAL CHEMICAL CO., 55 PITFIELD STREET, LONDON, N.

DENNEHY'S

LIME JUICE CORDIAL

OR

SYRUP.

RICH, BRILLIANT, DELICIOUS.

In Casks, 3s. 6d. Per Gallon. In Puncheons, 3s. 3d. Hhds., 3s. 3d.

F.O.B. EXPORT SHIP.

W. DENNEHY & CO., St. John Street, DUBLIN,

A.D. 1787.

IRELAND.

A.D. 1787.

Cash or Reference required with all Export Orders.

W. J. BUSH & CO.,

Distillers and Importers of

Essential Oils & Fruit Essences,

SPECIALITIES FOR AERATED WATER AND CORDIAL MANUFACTURERS,

ESSENCE LEMON,

EXTRA SUPER QUALITY.

The only pure Essence imported, made at our Works at Sicily.

ESSENCE GINGER ALE,

For Winter Drinks.

TONIC ESSENCE,

FOR BITTER WATER.

Soluble Essence Lemon.

SOLUBLE ESSENCE GINGER.

SOLUBLE ESSENCE OF PEPPERMINT.

BEWARE OF SPURIOUS IMITATIONS.

W. J. B. & Co. caution the Trade against the so-called Soluble Essences now so frequently offered for sale, which are nothing more than mere Tinctures; and although offered at lower prices, cost 5 or 6 times as much in use, whilst imparting a strong medicated flavour. W. J. B. & Co. further beg to inform their friends that Aerated Drinks—as Pale Ale, Horehound Beer, &c.—made from their Soluble Essences are exempt from Excise regulations.

NONE OTHERS ARE GENUINE.

CAUTION.

GUM EXTRACT

(French Cream).

PROTECTED BY ROYAL LETTERS PATENT.

For producing a Permanent Head of Creamy Richness on Ginger Beer, Ginger Ale, Lemonade, and other Aerated Beverages; also on Beers, Ciders, Wines, &c.

2s. 6d. per lb.

TO MAKERS AND VENDORS OF EFFERVESCENT DRINKS, AND TO THE PUBLIC GENERALLY.

N the High Court of Justice—Chancery Division—on Thursday, June 10, 1880, before Vice-Chancellor Sir C. Hall, an application as made in the action of Bush v. Young to commit the Defendant to prison for disobeying an injunction whereby he had been restrained from selling, imparting, or publishing a recipe, which is an infringement of a certain patent known as "Gum Extract," the property of a plaintiff, which is used in the mineral water trade for giving a creamy head or foam to ginger beer and other beverages: the defendant having published and sold a recipe for the preparation of the compound under the name of "Compound Fluid of Sarsaparilla," to be used for the same purpose. The defendant resisted on the ground that the bark used by him was not the same as that used by the plaintiff, being known as "Panama Bark." The plaintiff, however, proved that this was in fact the same, and a Court granted the injunction. The defendant also threatened to publish the recipe unless it were bought up by the plaintiff. His lordship made an order that in default of defendant paying the costs, he should stand committed to prison.

Persons infringing the above patent will be proceeded against, and those who give information of such infringement will be liberally rewarded.

W. J. BUSH & CO.,

20-23 Artillery Lane, Bishopsgate, London, E.

HAY'S GINGER CHAMPAGNE.

A DELICIOUS
NON-
INTOXICATING
AND
INVIGORATING
TONIC
BEVERAGE.



PRICE,
IN HALF-PINT
CHAMPAGNE
BOTTLES,
5s. 6d.
PER DOZEN.

This SPARKLING, EXHILARATING, and REFRESHING DRINK, while being far more agreeable in bouquet and flavour than the FINEST CHAMPAGNE WINE, is, at the same time, unlike it, FREE from ALCOHOL.

It is strongly recommended both for Juveniles as well as for Adults, as the most wholesome stimulating beverage that has hitherto been introduced, and should be in every household during all seasons of the year.

"One of the most delicate and wholesome drinks in the market. The creaminess, colour, and even the aroma of champagne are precisely imitated, and the other flavour of the Ginger Essence is peculiarly grateful."—*Medical Press.*

"Made by Mr. Hay, of Hull, with his well-known Superior ESSENCE OF JAMAICA GINGER, takes rank as a FINE, WHOLESOME, STIMULATING, and NON-ALCOHOLIC beverage."—*British Medical Journal.*

"So much does it please the palate that one feels inclined to open a second bottle after having drunk the first. This is a beverage which the practitioner can safely recommend."—*Medical Times and Gazette.*

"Mr. Hay, of Hull, deserves abundant success with his GINGER CHAMPAGNE. It is an exhilarating, wholesome, and very agreeable beverage."—*The Chemist and Druggist.*

"Creamy, sparkling, and pleasantly aromatic, is in our opinion the best thing of its kind yet introduced."—*Eastern Morning News.*

SOLE MANUFACTURER—

W. HAY, Chemist, &c.,

4 Regent's Terrace, HULL.

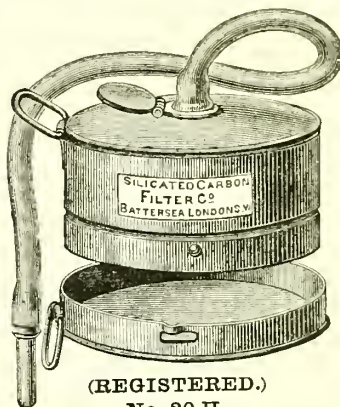
WHOLESALE AGENTS—MESSRS. INGRAM & ROYLE,

118 QUEEN VICTORIA STREET, LONDON, E.C.

NOVELTY. SILICATED CARBON POCKET FILTER,

IN GERMAN SILVER, NICKEL-PLATED.
Retailed at FIVE SHILLINGS each.

Designed by
MAJOR FRASER,
of the
ROYAL ENGINEERS,
especially
for Officers' Kits.
Weighs only 8 ounces.



(REGISTERED.)
No. 20 H.

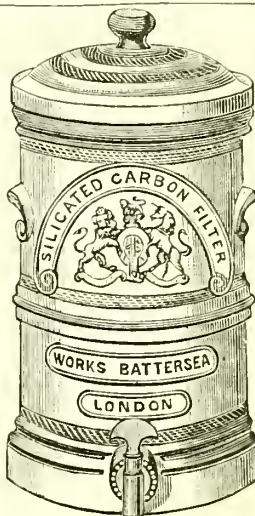
It has been approved
by the
Authorities at the
Horse Guards, and has
been largely
used in the Afghan and
Zulu Expeditions.

Sample sent free by Post on receipt of FOUR SHILLINGS.

DOMESTIC

Made in cream-coloured Stone-ware, fitted with the Silicated Carbon Media, complete with Cover and Silver-plated Tap.

All sizes of this pattern can now be had with Ice Compartment, which renders this Filter the most perfect of Refrigerators.



FILTER, NO. 27.

PRICES.

				With Ice Compartment.
No. O, capacity $\frac{1}{2}$ gallon		10s.	6d.	
No. A, " 1 "		14s.	6d. ...	17s. 6d.
No. B, " 2 "		21s.	0d. ...	25s. 0d.
No. C, " 4 "		32s.	0d. ...	36s. 0d.
No. D, " 6 "		42s.	0d. ...	48s. 0d.
No. E, " 8 "		52s.	0d. ...	60s. 0d.
No. F, " 12 "		70s.	0d. ...	80s. 0d.

MAIN SUPPLY FILTER, NO. 40.

SPECIALLY ADAPTED FOR
Mansions, Schools, Hospitals, Public
Institutions, Breweries, Distilleries,
Soda Water Manufactories,
Dye Works,

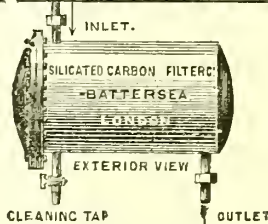
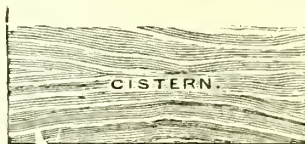
And all other Establishments where large quantities of

PURE WATER

Are required.

The ordinary Sizes kept in Stock are as follows:—

A, $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch pipe	£6 6s.
B 1-inch pipe	£9 9s.
O, $1\frac{1}{2}$ -inch, $1\frac{3}{4}$ -inch pipe	£15 15s.
D, 2-inch pipe	£26 5s.



This Filter is extremely simple in construction, and can be either connected with a Cistern or attached to the Main Service Pipe. It requires no attention beyond an occasional opening of the Cleansing Tap, and will deliver a supply of purified water at a rate of 50 to 1,000 gallons per hour, according to size.

Special Contracts entered into
for Large Works, Institutions,
&c., &c.,

FOR PURIFYING THE WHOLE OF THE WATER SUPPLY OF A BUILDING BEFORE USE.
Ensuring Rapid and Perfect Filtration, at either High or Low Pressure.

SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.

SILICATED CARBON FILTERS.

SYPHON FILTERS FOR TRAVELLERS.

By means of these filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the filter therein and drawing the water through the tube by suction.

Each of these portable Filters may be

They are readily cleaned from sedimentary matter by merely blowing through the tube, and brushing the surface of the filtering medium.

- | | |
|--|-------|
| -Pocket Filter, 2½ inches diameter, in porcelain, with glass mouthpiece, in decorated metal box | s. d. |
| .. .. . | 2 6 |
| -Ditto, 3½ inches diameter, in best stoneware | 5 0 |
| -Ditto, " " with silver-plated tap | 7 0 |
| -Emigrant's, 5 inches diameter, with silver-plated tap | 12 0 |
| -Pocket Filter, for carrying over shoulder, as supplied to the Forces in Abyssinia and in Zululand, and to the Ashantee Expedition | 3 6 |
| -Ditto, nickel-plated, designed by Major Fraser, R.E., and specially recommended by the Horse Guards for Officers' kits | 5 0 |

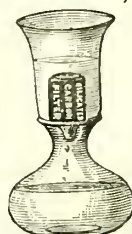


No. 20.

used as a Syphon by placing it in a vessel of water, then drawing the water by the mouth, and allowing the flexible tube to hang over the side below the Filter. When once set in operation their action is continuous.

TABLE FILTER, NO. 24.

Made of stout glass, in 1, 2, and 3 pint sizes, the filtering medium being securely fitted into the bell-funnel, so that it is not liable to become loose, or to allow unfiltered water



to pass. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

PRICES.

O, 2s. 6d.; A, 4s.; B, 5s. 6d.
Engraved Vine Pattern—O, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d.

POROUS TERRA COTTA FILTER, NO. 29

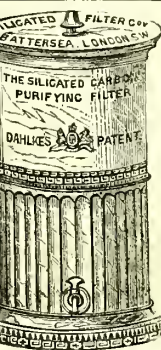
Shape of this Filter as Fig. No. 24.

O, 2s. 6d.; A, 4s.; B, 5s. 6d.

SILICATED CARBON BLOCKS.

2in., 1s. 6d.; 2½ in., 2s. 6d.; 2¾ in., 3s.; 3½ in., 4s.; 4¾ in., 5s. 6d. ea.

SPECIAL QUOTATIONS FOR QUANTITIES.



DINING-ROOM FILTER, No. 22.

MADE IN MARBLED CHINA.

Size A holds about two gallons; size B, five gallons.

PRICES.

A	35s.
B	80s.
A, with Ice Compartment.. .. .	42s.
(New Patent.)	
B, with Ice Compartment.. .. .	100s.
(New Patent.)	

The large size (B) is specially adapted for Hotels, Refreshment Rooms, Luncheon Bars, &c.

REFRIGERATOR FILTER, NO. 25.

Made in Porous Terra-Cotta Ware,

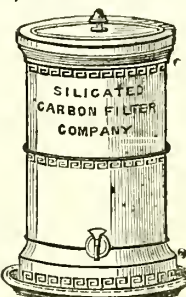
Which acts with remarkable power as a cooler, and renders this Filter invaluable, especially in Tropical Climates,

affording a

COOL DRAUGHT OF PURE WATER.

Price, with Silver-plated Tap 31s. 6d.
Ditto, ditto, with Ice Compartment.. .. . 42s. 0d.
Capacity Two Gallons.

Specially adapted for Tropical Climates.



SILICATED CARBON (Regd.) ASCENSION FILTERS.

The most efficient known Filter

PRICES:

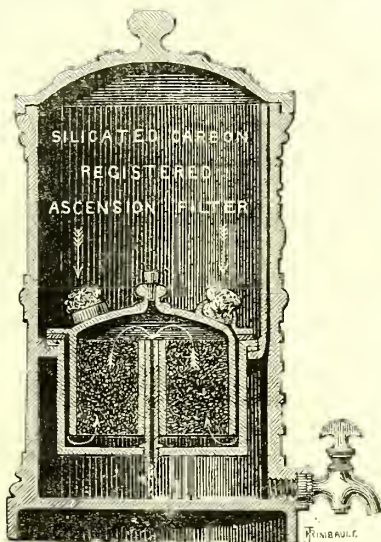
No. 38.

- 1 Pint, 2/6 ea.
2 " 4/-
3 " 5/6

The Water passes upwards through the Silicated Carbon in the direction shown by the Arrows in the Drawings.



No. 38.



No. 37.

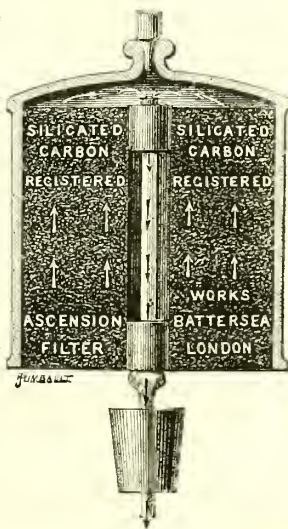
for Table and Domestic Use.

PRICES:

No. 37.

- 1 Gal., 18/- ea.
2 " 26/-
4 " 38/-

The inner blocks being movable, by attaching an indiarubber tube they can be converted into Pocket or Travelling Filters.



SECTION OF NO. 38.

WRITE FOR FULL LISTS TO THE

SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.

GOLD MEDAL, PARIS EXHIBITION, 1878.

FRY'S COCOA EXTRACT.

Guaranteed Pure Cocoa only. A perfectly pure and delicious beverage, prepared exclusively from Choice Cocoa Nibs, with the superfluous oil extracted.

"If properly prepared, there is no nicer or more wholesome preparation of Cocoa."—Food, Water, and Air, Dr. HASSALL.

"It is strictly pure, and well manufactured in every way."—W. W. STODDART, F.I.C., F.C.S., City Analyst, Bristol.

"Pure Cocoa, from which a portion of its oily ingredients has been extracted."—CHAS. A. CAMERON, M.D., F.R.C.S.I., Analyst for Dublin.

TRY ALSO

FRY'S CARACAS COCOA, a delicious preparation

J. S. FRY & SONS, BRISTOL AND LONDON.

MUSTARD.

FINCH, RICKMAN & CO.'S Genuine Qualities

Are made from the finest mustard seeds only. Their compounds, as manufactured for upwards of a century, are guaranteed free from all ingredients imparting spurious heat, and are therefore equally suitable for both table and medical purposes.

6 BROKEN WHARF, UPPER THAMES STREET,
LONDON.

CHEMISTS' TEA AGENCY.

WALKER & DALRYMPLE'S Broken-Leaf Tea

1s. 8d. per lb.

A money-saving tea. Absolutely pure. The small leaf from some of the finest Indian and China Teas. Produces a tea in the cup stronger, richer, and cheaper than most whole-leaf teas. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S Intermediate Tea,

2s. per lb.

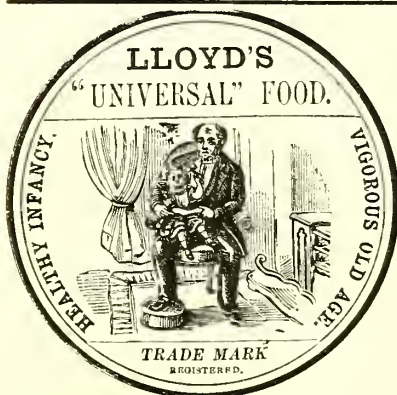
BEST at the PRICE EVER SOLD. Great strength, and a most useful tea where there is a large consumption. Recommended to all who wish to save in their tea. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S TEAS.

Agents appointed, where unrepresented, throughout the United Kingdom. Prospectus and samples free on application.

Warehouses—154 and 155 Whitechapel Road, London.

P.O.O. payable at Head Office. Bankers—The National Provincial Bank of England.



LLOYD'S "UNIVERSAL" FOOD

(Patent Cooked Malted Farinaceous),

THE NEW FOOD
FOR INFANTS, CHILDREN, AND ADULTS,
BOTH IN HEALTH AND SICKNESS:
REQUIRES NEITHER BOILING NOR STRAINING.

This Food consists of the most nutritious and finest-selected cereal grains and pulse, combined with the active constituents of pure fresh malt meal, in such proportions as to render the mixture as nearly as possible chemically identical with the constituents of the human body itself. It is therefore valuable for everyday use, both in health and sickness, and for every condition of life; alike suited to the youngest child, the most robust adult, and the weakest invalid. Being thoroughly cooked, it is quickly and easily made; and being palatable, it is attractive, instead of, as so many foods are, repulsive. This New Food is unlike any other, having special qualities and virtues of its own, such as are possessed by nothing else. It is excellent for breakfast instead of bread and milk or bread and butter, for Dinner is delicious as Custard with Stewed Fruit or as Baked Pudding, and is of inestimable value for Supper. It also contains the greatest amount of nutriment in the smallest bulk, and in the most convenient and easily-digested form, and is invaluable in all cases of weak digestion, confirmed indigestion, and constipation, as its daily use regulates the natural functions of the body, and renders medicine for this purpose unnecessary.

EXCELLENT for Breakfast.
UNSURPASSED for Supper.
DELICIOUS as Baked Pudding.

NOURISHING as Custard, with
Stewed Fruit of all kinds.
INFANTS thrive Splendidly on it.

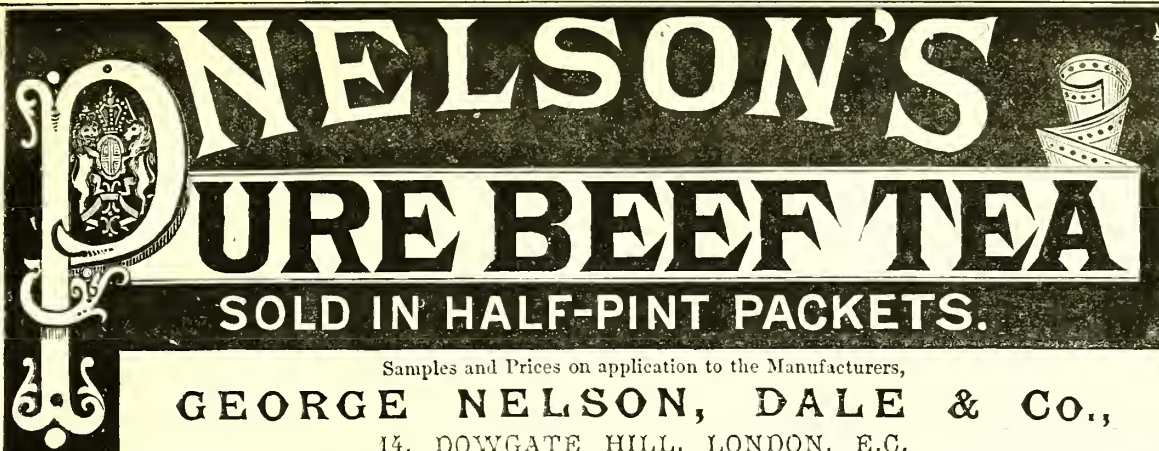
CHILDREN grow Strong on it.
ADULTS keep Well on it.
INVALIDS recover on it.

Analytical Report by Professor ATTFIELD, F.R.S., &c., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain.

"I have made a chemical analysis and microscopical examination of LLOYD'S 'UNIVERSAL' Food, a well-mixed and prepared meal. I find it to be a true food, rich in all the elements necessary to the formation of flesh, fat, bone, and muscle, and therefore greatly superior to mere starchy 'foods.' Its elements are in a proper form, in a perfectly cooked form, and in natural proportions. The phosphates present equal fully two per cent. of bone phosphate. The nitrogenous or flesh-forming matter amounts to as much as fifteen per cent. (Signed) JOHN ATTFIELD."

In Tins, at 1s., 2s., 5s., and 10s. each, less usual discount, of the Manufacturers,

J. & C. LLOYD & CO., Verulam Street, Gray's Inn Road, LONDON, E.C.



NELSON'S

PURE BEEF TEA

SOLD IN HALF-PINT PACKETS.

Samples and Prices on application to the Manufacturers,
GEORGE NELSON, DALE & Co.,
 14, DOWGATE HILL, LONDON, E.C.

E. LAZENBY & SON (5 EDWARDS STREET, PORTMAN SQUARE.) Sole Proprietors of the Celebrated Receipts and Manufacturers of the Pickles, Sauces and Condiments so long and favourably distinguished by their name, beg to remind the public that their labels are affixed to the choicest description of goods only, that every article prepared by them is guaranteed as entirely unadulterated and may be obtained of Grocers, Italian Warehousemen and others.

HARVEY'S SAUCE.—CAUTION.—The admirers of this Celebrated Sauce are particularly requested to observe that each bottle bears the well-known label signed "ELIZABETH LAZENBY"; this label is protected by perpetual injunction in Chancery of the 9th July 1838 and without it none can be genuine.

18 TRINITY STREET, LONDON. S.E.

Elizabeth Lazenby

SPECIAL NOTICE & CAUTION.

BRAND & CO.

The Original Manufacturers of Essence of Beef (green label under wrapper), and other Specialities for Invalids, have

NOT REMOVED

from their SOLE ADDRESS, No. 11 LITTLE STANHOPE STREET, MAYFAIR, W, and caution the trade to

BWARE of IMITATIONS.



BRAND & CO'S
 ESTD 1835
SPECIALTIES FOR INVALIDS
 ESSENCES OF BEEF, MUTTON, YEAL & CHICKEN, BEEF TEA, TURTLE SOUP & JELLY, MEAT LOZENGES &c.
 SOLE ADDRESS NO. 11, LITTLE STANHOPE ST. MAYFAIR, W.

CONTRACTORS TO HER
 AND THE



MAJESTY'S GOVERNMENT
 INDIAN GOVERNMENT.

THE CONSOLIDATED SOUP AND FOOD CO., 23 CASTLE STREET, FINSBURY, LONDON, E.C.

VALENTIA.

This delicious Food, prepared by our special process after the result of prolonged experiments, we are now enabled to offer to the public at an exceptionally low price. It will be found invaluable for Invalids, as it corrects acidity, cures indigestion, asthma, phlegm, sleeplessness, &c., acts on the liver and kidneys, giving a tone to the stomach, and thereby restoring the appetite and sound health. For delicate infants (when made thin to pass through feeding bottle) it will be found more nutritious than nurse's milk. One pound of this Food contains more wholesome nourishment than 4 pounds of the best beef or mutton.

Sold everywhere in 1-lb. Tins, at 1/6 per lb., sufficient to make 16 Pints. Wholesale, 12/0 per dozen less usual discount to large buyers.

Berners College of Experimental Science and School of Classical and Technical Education, 44 Berners Street, W., August 20th, 1880.

ANALYTICAL DEPARTMENT.
 To the CONSOLIDATED FOOD CO., 23 Castle Street, Finsbury, E.C.
 Gentlemen.—This is to certify that I have made a careful examination of the "Valentia" Food, and find it an exceedingly nutritious compound, rich in nitrogenous matters, viz., in Legumen, Albumen, Gluten, &c., combined with an appropriate amount of "Respiratory" Food. It also contains the valuable "Food Phosphates of Potash and Lime" amongst other mineral constituents.
 The Food is quite free from any objectionable substance or quality.

EDWARD V. GARDNER, F.A.S., M.S.A.

Professor of Chemistry, late of the Royal Polytechnic Institution.

Berners College of Experimental Science and School of Classical and Technical Education, 44 Berners Street, W., August 20th, 1880.

To the CONSOLIDATED FOOD CO.—Gentlemen.—I have carefully examined and analysed the "Valentia" Food prepared by you. 100 parts contain:—
 Moisture 10'00
 Soluble Nitrogenous Organic matter, viz., Gluten, Legumen, and Starchy matters, &c. 33'00
 Other Nitrogenous Organic substances, viz., Albumen, Fibrine, &c. 54'50
 Inorganic Constituents, principally Phosphate of Potash and Lime, with Salts of Alkalies 2'40
 Traces of Soluble Silica 100'00

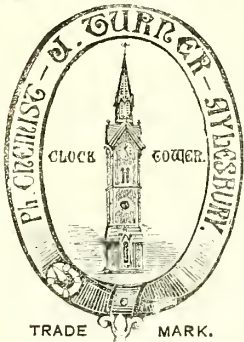
EDWARD V. GARDNER, F.A.S., M.S.A.

Professor of Chemistry, late of the Royal Polytechnic Institution.

Wholesale of Messrs. Sanger & Sons, 252 Oxford Street, and all Wholesale Druggists and Druggists' Sundrymen.

TURNER'S TARAXACUM OR DANDELION COFFEE

IS THE BEST.



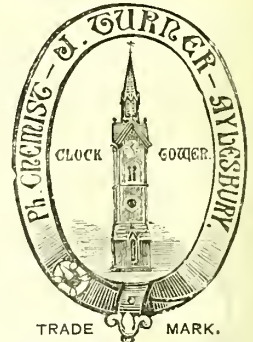
Is sold in 6d., 1s., and 2s. Tins only, and each Tin bears the Proprietor's "Registered Trade Mark" on the Wrapper, without which it is not genuine.

TURNER'S DANDELION COFFEE

Is recommended by the Faculty. See Testimonial.

TESTIMONIAL from C. SPENCER, Esq., M.R.C.S., WHITCHURCH.

"Dear Sir,—I have tried your Coffee, like it, and can speak very highly of it. Yours truly,
"Mr. J. Turner." "C. SPENCER."



This Preparation is well got up, gives a good profit, and will only be supplied to one Chemist in each Town.

TERMS ON APPLICATION TO THE PROPRIETOR.

Prepared and Sold by J. TURNER, Pharmaceutist, AYLESBURY.

GROUT'S MOTHER'S FRIEND INFANT'S FOOD WARMER.

FOOD KEPT WARM 12 HOURS WITHOUT ATTENTION

In the Bottles ready for use.

Particulars and Testimonials on application to the Inventor and Manufacturer,

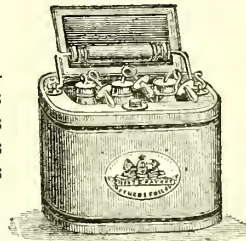
JOHN GROUT, HEREFORD.

Supplied from London Agents—MAW, SON & THOMPSON, Aldersgate Street; LYNCH & Co., Aldersgate Street; and CROWDEN & GARROD, Falcon Square.

RETAIL PRICE LIST.

Size for Two
Bottles.

Cloth Cover . 12/-
Bright Tin do. 16/6
Japan'd do. . 18/6
Copper do. . 22/6
Brass do. . 22/6
Copper interiors,
9/6 extra.



Size for Three
Bottles.

Cloth Cover . 14/-
Bright Tin do. 18/6
Japan'd do. . 20/6
Copper do. . 27/6
Brass do. . 27/6
Copper interiors,
12/- extra.

ESTABLISHED 1843.

M. A. CRAVEN,

Wholesale & Export Confectioner,

AND MANUFACTURER OF

MEDICATED LOZENGES, REFINED LIQUORICE, JUJUBES, &c.

PAVEMENT, CONEY ST., & COPPERGATE, YORK.

Lozenges of all descriptions made from Customers' private formulæ (or ingredients) and stamped with name if required.

PRICE LIST ON APPLICATION.

GIBSON'S

DELECTABLE JUJUBES, VOICE JUJUBES, AND GLYCERINE PASTILLES,

Put up in 4-lb. Decorated Tins with Glass Lids, TINS FREE, are now being inquired for by buyers from all parts of the world. They are not surpassed in quality by any maker, and give entire satisfaction.

MEDICATED and HIGH-CLASS LOZENGES, of every kind.

Sent out in 2-lb. or 4lb. Bottles, Bottles Free; or in Tins, from 10 lb. upwards.

LIME JUICE TABLETS, THIRST QUENCHERS.

ACID DROPS, AND BEST QUALITY BOILED SUGARS OF EVERY KIND.

GIBSON'S ORIGINAL CHLORODYNE LOZENGES.

PENNY SUGAR WORM CAKES, suitable for either children or adults. Have an immense sale, keep in any climate, and please everybody. Manufactured by

ROBERT GIBSON, Carlton Works, Hulme, Manchester, and 1 Australian Avenue, London.

Price Lists sent on application. Our Goods can be bought through any Wholesale or Export House in London.

KORFF'S

33/ per Dozen Pound Tins.
 17/ " " Half-Pound Tins.
 9/ " " Quarter-Pound Tins.

PURE CHOCOLATE

Of all the Wholesale Houses, and
E. A. PHILLIPS & CO., 23 GREAT ST. HELEN'S, LONDON, E.C.

POWDER.**MAWER'S TARAXACUM OR DANDELION COFFEE,**

Prepared from the Fresh Root,

IN TINS, 6d., 9d., 1s., 1s. 6d., and 2s.,

Is by far the best in the market. Excellent in quality, neatly packed, cheap and economical, and a very saleable article. Beware of worthless imitations.

See Analytical Report on every packet by Professor Attfield, F.R.S., &c.,
Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain.

A LARGE BUYER writes:—"Our customers ask for Mawer's Taraxacum, and will have no other, and we are doing well with it."

A NOBLE EARL, the oldest in the House of Peers, sends the following message:—"Present my compliments to Mr. Mawer, and tell him I like his Taraxacum, and that it agrees with me very well; and request him to send the usual number of tins."

Terms and Price Lists on application to the Manufacturer—

EDWARD MAWER,

Chemist,
HIGH WYCOMBE, BUCKS.

Handbills and Show Cards supplied gratis.

BEER IN BOTTLE.**WHITBREAD & CO.'S****LONDON COOPER,****STOUTS AND ALES,**

SOLD BY ALL RETAILERS OF BEER IN BOTTLE.

ROBERT BAKER, Sole Agent,**277 GRAY'S INN ROAD, W.C.**

OBSERVE:—ALL CORKS BRANDED "WHITBREAD & CO."

LABELS—CHOCOLATE LETTERS ON ORANGE GROUND.

Whitbread & Co. are the only large Brewers who Bottle their own Beers.

Product of a special refining process.

It is Chocolate devoided of its over-richness and substantiality.

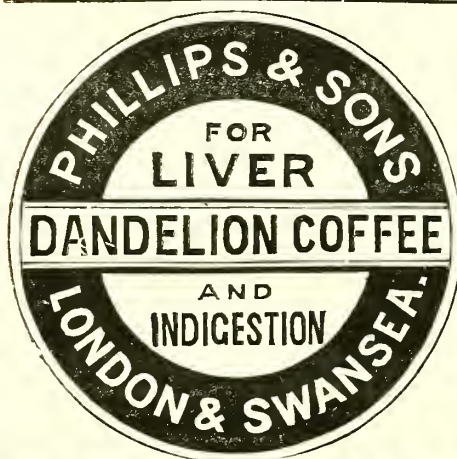
Sugarless, and, when made, of the consistence of Coffee.

An afternoon Chocolate.

In packets, 6d. and 1s., and tins, 9d., 1s. 4d.,
2s. 8d., 5s., or 7s. 6d. labelled.

JAMES EPPS & CO.,
Homœopathic Chemists,
LONDON.

EPPS'S CHOCOLATE ESSENCE.



ESTABLISHED 1760.

Contains three times the strength of ordinary Breakfast Beverages.

ONCE TRIED ALWAYS USED.

The valuable properties of the Dandelion Root, recognised by eminent Physicians for many centuries, has now become an article of daily use.

Sold by all Chemists throughout the Kingdom in Tins at 1s. 6d., 1s., 9d., and 6d.—*Price Lists on application to the Manufacturers,*

PHILLIPS & SON,
CASTLE SQUARE, SWANSEA,
AND ARTHUR STREET WEST, LONDON BRIDGE,

JAS. WOOLLEY, SON & CO., Manchester.
W. MATHER, Export Agent, London.
CLARKE & McMULLAN, Belfast.
GOODALL, BACKHOUSE & CO., Leeds.
McMAISTER & HODGSON, Dublin.

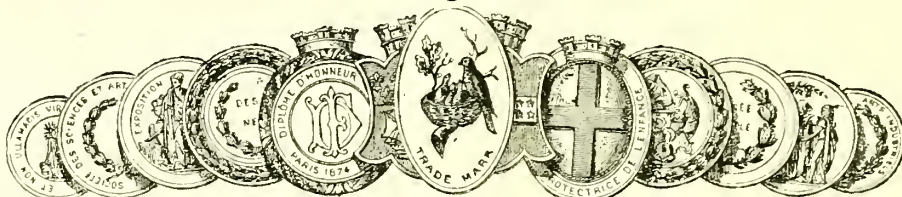
OR OF
EVANS, SONS & CO., Liverpool, &c.
MAW, SON & THOMPSON, Aldergate Street, London.
BURGOYNE, BURBIDGES & CYRIAX, 16 Coleman Street

BARCLAY & SONS, Farringdon Street.
COLONIAL AGENTS—Melbourne, Adelaide, and Sydney—P. T. FALK; BLYTHE & CO. New Zealand, Nelson, Canterbury, Auckland—A. SCLANDERS & CO.; E. & A. ISAACS. Adelaide—F. H. FAULDING & CO. Cape, Algoa Bay, East London—L. DREXFUS.

SPECIAL TERMS TO MERCHANTS AND SHIPPERS.

NESTLE'S MILK FOOD AND CONDENSED SWISS MILK.

These incomparable products of world-wide celebrity have obtained the following Prizes:



Also the Gold Medal at Paris Exhibition, 1878; Silver Medal, Sydney, 1879;
"First Order of Merit," Melbourne, 1881.

OBTAINS A PRIZE WHEREVER EXHIBITED.

Foreign and Colonial Importers should obtain their supplies through any Wholesale Firm in Great Britain, or Shipping Agent, thus ensuring fresh stock and lowest prices.

PRINCIPAL DEPOT:—9 SNOW HILL, LONDON.

THE NEW SEAMLESS TIN BOXES,

In Crystallised, Decorated, or Plain Tin Plates, suitable for Blacking, Polishing Paste, Tooth Powder, Plate Powder, Pomade, Lozenges, &c., &c.

SPICE AND BISCUIT BOXES, COFFEE, MUSTARD, AND POWDER CANISTERS,
LIQUID PAINT TINS, &c.

C. SMITH & SONS, ARUNDEL WORKS, SHEFFIELD.

SILVER MEDAL,



PARIS, 1878.

THE

Tin-Plate Decorating Co.,

MANUFACTURERS OF THE NEW

CRYSTALLIZED TIN BOXES,

FOR TOILET AND OTHER PURPOSES.

GOLD MEDAL,



SYDNEY, 1879.

SEAMLESS DECORATED TIN BOXES,

Suitable for Blacking, Polishing Paste, Tooth Powder, Pomade, Pills, Lozenges, &c.

DECORATED TIN CANISTERS,

For Disinfectant Powder, Baking Powder, &c., &c., &c.

WORKS: NEATH, SOUTH WALES.

PATENT PLUMBAGO CRUCIBLE COMPANY

(SOLE MANUFACTURERS OF MORGAN'S PATENT CRUCIBLES).

EXHIBITION AWARDS:—

Paris, 1878, Gold Medal.

Only Medals in London, 1862. Dublin, 1865. New Zealand, 1865. Oporto, 1865.

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ASSAY CRUCIBLES.

THE MINT OF THE UNITED STATES AT SAN FRANCISCO,

OFFICE OF THE ASSAYER,

SAN FRANCISCO, CAL., April 19, 1877.

SIR,—I have tested and used the Assay Crucibles and Annealing Cups, and can with assurance recommend their superior quality and durability.

Respectfully yours, &c.,

O. D. MUNSON, Assayer.

STATE ASSAY OFFICE,

SAN FRANCISCO, May 1, 1877.

We have given the Crucibles and Muffles a fair trial, and can recommend them for use of Assayers and Chemists.

Yours, &c.,

FALKENAU & REESE.

1.—FOR GOLD.

THESE ARE PERFECTLY SMOOTH, AND OF THE CORRECT POROSITY.

No.	Diam. in.	Height. in.	Per doz.
A.	1½	1½	2s. 0d.
B.	1½	1½	2s. 0d.
C.	1½	1½	2s. 0d.
D.	1½	2	2s. 0d.

Covers for either size, 6d. per doz.



2.—FOR COPPER.

CORNISH FORM AND QUALITY.

Nest of Two	{ 3½ in. high, 3 in. diam. }	2s. per doz.
Single	{ 2½ " " 2½ " }	1s. "

All Forms and Sizes can be had.

Among the English Firms who have received Awards at the Centennial, Philadelphia, are the Patent Plumbago Crucible Company, Battersea Works, London, for Jewellers' and Chemists' Furnaces, Muffles, Crucibles, and Scorifiers.—*Chemist and Druggist*.

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PATENT PLUMBAGO CRUCIBLE CO., BATTERSEA WORKS, LONDON, S.W.

HORSE, CATTLE, AND SHEEP MEDICINES.



By Special Warrant,
Dated 27th December, 1865.

BY ROYAL APPOINTMENT.



By Special Warrant,
Dated 10th February, 1866.

DAY, SON & HEWITT,

INVENTORS AND SOLE PROPRIETORS OF THE

"ORIGINAL" STOCK BREEDERS' MEDICINE CHESTS,

For all Disorders in Horses, Cattle, Calves, Sheep, and Lambs.

Patronised for over 40 years by Royalty, and the principal Stock Breeders, Horse Proprietors, and Agriculturists of the British Empire.

The No. 2 MEDICINE CHEST contains the following matchless remedies:—

"CHEMICAL EXTRACT," for all External Injuries, and Ewes Lambing.

"GASEOUS FLUID," for Colic, Scour, or Diarrhoea, and Debility.

"RED DRENCH," for Cleansing Cows and Ewes, and for Inflammation.

"RED PASTE BALLS," for Mares after Foaling, and Conditioning Horses.

"BRONCHOLINE," for Husk or Hoose in Sheep, Lambs, and Calves.

"GASEODYNE," for Heaving and Paining, "CARMINATIVE CHALK," &c.

Price of Chest, with Guide to Farriery, £2 16s. 6d. No. 1 Complete Medicine Chest, in Polished Case, £6 6s. Horsekeeper's Chest, No. 4, £2 17s. 6d.

CARRIAGE PAID TO ALL PARTS.

Admirably adapted for all ordinary ailments among Stock, and each preparation can be had separately. Full and easy directions enclosed. Awarded "Certificate of Merit" by the National Agricultural Society of Victoria, Australia, Spring Exhibition, 1871; President's Medal, Spalding Show, July, 1872; Silver Medal, Manchester and Salford Show, November, 1874; Silver Medal, Preston Agricultural Show, June, 1875; Silver Medal, Northamptonshire Agricultural Society, Stamford Show, September, 1875; Silver Medal, Cheshire Agricultural Society, Crewe Show, September, 1875; Special Prize, National Agricultural Society of Victoria, Australia, November, 1875; Medal, Cheshire Agricultural Society, Cheshire Show, 1876; Silver Medal, South African Exhibition, Cape Town, 1877; Silver Medal, Northumberland Agricultural Society, Newcastle-on-Tyne Show, August, 1877; Silver Medal, Knutsford Show, July, 1878; Medal, North Berwick Show, July, 1878; Medal, Dairy Show, London, October, 1878; Silver Medal, Derby, September, 1879; Silver Medal, Wellingborough, September, 1879; and Medal, Benthams, September, 1880.

CAUTION.—Beware of low-priced Imitations, and see that the name of DAY, SON & HEWITT is on all Bottles and Packets.

Prepared only by DAY, SON & HEWITT, 22 DORSET STREET, BAKER STREET, LONDON, W.

And sold by Messrs. Burgoine, Burbridges & Co., Barclay & Sons, W. Edwards, Newbery & Sons, Sanger & Sons, and all Wholesale Druggists, in London; Hood & Co., Melbourne; Kempthorne, Prosser & Co., Dunedin and Auckland; Fairthorne & Co., Launceston.

ELLIMAN'S ROYAL EMBROCATION
IN BOTTLES 2s 2s6d & 3s6d EACH

A CERTAIN CURE FOR

Sprains, Cuts, Splints, Broken Knees, Spring Sickness, Overreaches, Chapped Heels, Windgalls, Lameness, Sore Backs, Sore Shoulders, Bruises, Sore Throats, Indigestion.

Prepared by ELLIMAN, SON & CO., Scotch.
is used in most Sunds and in a large proportion of the Stables of the Masters of Stag and Fox Hounds; among others—the Duke of Rutland, the Earl of Maclefeld; the Marquis of Huntly; Hon. A. Balfour Hamilton, M.P.; Lord Middleton; Duke of Buccleuch; Earl of Yarborough; Earl of Shannon; Earl of Eglington and Winton; Viscount Zetland; Earl Percy; the Hon. Ralph Nevill; Viscount Valentia; J. T. D. Lewellyn, Esq.; A. Brassey, Esq.; J. B. Booth, Esq.; C. Morrell, Esq.; Capt. R. Tounson Rye; Lieut.-Col. Everett.



Lame Hunter. (Trade Mark.) The Royal Hunter Cured.
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SPRATTS PATENT MEAT "FIBRINE" DOG CAKES & POULTRY MEAL, DOG MEDICINES AND DOG SOAP.

TO CHEMISTS AND DRUGGISTS.

The above Goods have an enormous Sale. For Terms, address—

"SPRATTS PATENT," Bermondsey, S.E., or order through your Wholesale House.

Wholesale Agents for the Soap and Dog Medicines:—Barclay & Sons; Sanger & Sons; Sutton & Co.; F. Newbery & Sons; Lynch & Co., London; Raimes & Co., Edinburgh, York, and Liverpool; Ravensdale Mill Co., Dublin; Woolley, Sons & Co., Manchester; Taylor, Gibson & Co., Newcastle-on-Tyne; Goodall, Backhouse & Co., Leeds; and of all Wholesale Houses.

CUPISS'S CONSTITUTION BALLS.

THE best and most effectual Medicine for preserving Good Health and Prime Condition in that Noble Animal THE HORSE.

ALSO FOR NEAT CATTLE they are invaluable both in Disease and as a means of preserving health. Bulls fatten much faster and at a less cost by occasionally giving a Ball.

PREPARED BY

FRANCIS CUPISS, M.R.V.C.S.,
DISS, NORFOLK.

Sold by all Chemists and Patent Medicine Vendors.

Persons using the Balls may consult the Proprietor gratuitously.

TO CHEMISTS.

M^R. CUPISS, Diss, Norfolk, Proprietor of the Constitution Balls, will have pleasure in supplying the Trade, on application, with Bills for distribution, and Posters, which are very attractive, delivered free to any House in London, or other large town, for inclosure; and to prevent error, it is desirable to send a card of address.

Important Notice to the Trade.

HELLIAR'S FLY TICK & LEAR POWDER,

For Dressing Sheep and Lambs.

ESTABLISHED 1857.

May be sold without Registration, as it contains no poison prohibited by Act. Sold in Tins at 1s. for 20, 2s. for 50, and 3s. 6d. for 100 Sheep, with full instructions for use.

IMPORTANT TESTIMONIAL from W. F. BENNETT, Esq., Chilmark, Salisbury.—"Your Fly Powder has been used on my flock some years, and I have always found it most efficacious in keeping off the fly and killing ticks; in fact, I have not dipped my lambs for the last two years.—Aug. 30, 1875."

1/- size, 9/-; 2/-, 18/-; 3/6, 31/6 per doz., carriage paid, discount 5 per cent. 3 months' account.

LONDON WHOLESALE AGENTS:—Barclays, Sangers, W. Edwards & Son, Hovenden & Sons. EXETER: Evans, Gadd & Co.

PREPARED ONLY BY

EDWIN HELLIAR, Manufacturing Chemist,
YEOVIL, SOMERSET.

CASTOR OIL SHEEP OINTMENT.

The most effectual Cure of Scab, Killer of Ticks, Red Lice, and all other Parasites; also,

GENUINE SHEEP OINTMENT.

Prepared by steam power, and none but the best materials being used, these Ointments are uniform in strength, and the consistency most suitable for Smearing in hot or cold weather.
Sold in Drums of 4, 7, 14, 28, 56, and 112 lbs. each.

THE "GLYCERINE DIP"

(HARDWICKE, GUERIN, & CO.'S),

FOR SHEEP & LAMBS,

GREATLY PROMOTES THE GROWTH OF THE WOOL.

A certain Preventive and Cure of Scab, Destructive to Ticks, Lice, and all Parasites infesting the Skins of Sheep, Cattle, and other Animals. Price 6d. lb.

Sold in Drums of 5, 10, 20, 30, 40, 50, and 100 lbs. each.

THE ORIGINAL "LUDDINGTON'S OILS,"

THE CELEBRATED

HORSE, SHEEP, AND CATTLE MEDICINE.

Unrivalled as a Safe, Effectual, and Speedy Remedy for all Diseases in Horses, Sheep, and Cattle, and is invaluable in cases of DIFFICULT LAMBING, FOALING, and CALVING.

In Bottles, 2s. 6d., 5s., and 10s. each.

Price Lists on application to

TOMLINSON & HAYWARD,

MANUFACTURING CHEMISTS, LINCOLN.

Agents required in every Town. Hand-bills, Pamphlets, Posters, Show Cards, for these and their other preparations—BUTTER POWDER, "GRANULAR BROWNING," DANDELION COCOA—supplied on receipt of trade address.

BATTLE'S VERMIN KILLER. { Mice eat it readily, and Die on the spot.

Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs.—Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

TESTIMONIALS.—Thousands might be published.

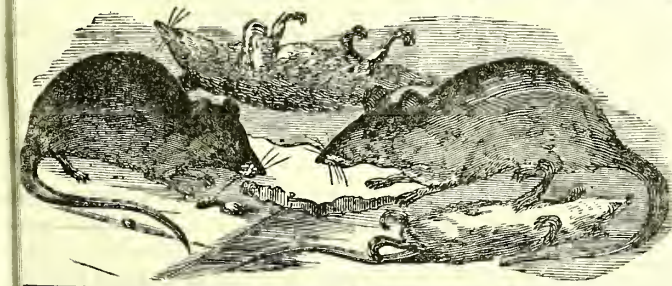
From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy; to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet.—From Mr. EDWARD STURDY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets.—Leeds, November 6th, 1857.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

SOLE PROPRIETOR:

Mr. J. R. BATTLE, Chemist, Lincoln, England.

No Chemist or Storekeeper should be without a supply.

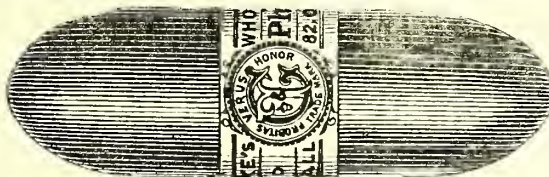


DRUGS, CHEMICALS, PHARMACEUTICAL PREPARATIONS.

GABRIEL & TROKE,

Wholesale and Export Druggists and Manufacturing Chemists,
82 CITY ROAD, LONDON.

GABRIEL & TROKE'S REGISTERED CAPSULED HORSE BALLS,



Manufactured solely by GABRIEL & TROKE,
WHOLESALE DRUGGISTS, 82 CITY ROAD,
LONDON.

MANUFACTURERS OF ALL VETERINARY PREPARATIONS, EVERY KIND OF
VETERINARY INSTRUMENTS AND SUNDRIES.
SAMPLES AND SPECIAL QUOTATIONS FOR LARGE BUYERS.

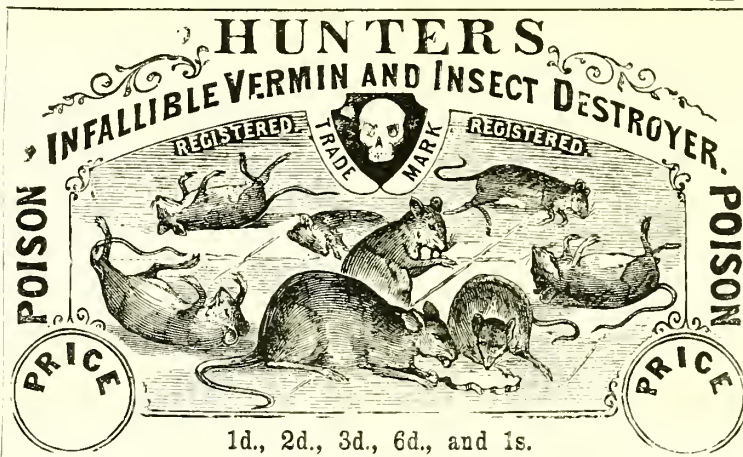
Oils are prescribed These Capsuled Balls are most convenient and safe and well adapted for export, keeping good in any climate. They are put up in Boxes of 1 dozen each. Capsuled Balls of the most approved formula on hand, and private recipes faithfully and accurately dispensed. Shipping orders promptly and carefully executed, and at lowest market prices. Price Lists of a very extensive character in the most handy referable style on application.

THE Superior advantages of these Balls are obvious. The mass is confined in a hermetically sealed gelatinous Capsule, perfectly harmless, and immediately dissolved in the stomach. The Capsule will not only prevent the Ball from getting dry and hard, but will preserve its purity and power for any reasonable time, and ensure the effectiveness of the medicine—especially when such drugs as Camphor, Ammonia, or Essential

"HUNTER'S" INFALLIBLE VERMIN DESTROYER.

"The Best Extant."

The enormous sale last year of this old-established article, and the few specimens of testimonials below, stamp it as undoubtedly "the best extant." It is very neatly and very carefully put up throughout, and is indeed a most satisfactory article in



Thirty-five years' Reputation.

every respect, proof of which lies in the fact of its having — although not constantly advertised — steadily maintained its reputation as such, ever since its introduction to the trade and the public, now about thirty-five years ago.

"CANNOT BE EXCELLED."

From Mr. Smith, Chemist, Glasgow:—"I have not kept any other 'Vermin Killer' than yours for the last four years. It is the best I ever sold."
From Mr. Geo. Eagle, Merrickville, Sydney, Australia, to Mr. Mitchell, Druggist, Pitt Street, Sydney:—"Sir, I promised to let you know how 'Hunter's Vermin Destroyer' acted. Its effect was wonderful; in one night it destroyed all the rats and mice about my house, which was swarmed with them."

From Mr. A. Billington, Chemist, Wakefield; August 28, 1878:—"Dear Sir, Please send me a few of your Vermin Killer Registers. I can bear testimony to the deadly effect of your 'Killer,' having one night laid in my warehouse the contents of a 2d. packet, and found in the morning no fewer than forty dead mice."

Kept in Stock by all the Wholesale Houses in the Trade throughout the United Kingdom. Vide Trade Lists, &c.

LABORATORY—WESTGATE & UNION STREET, DEWSBURY, ENGLAND.

HORSES.—LIEUT. JAMES'S BLISTER

(Manufactured by R. J. JAMES, the Grandson of the Inventor).

This celebrated Blister is now offered to the Trade at the following reduced prices:—

1 oz. pots from	14/- per doz. to	12/6 per doz.	1 lb. pots from	£4 4 0 per doz. to	£4 0 0
2 " "	£1 5 6 "	£1 3 0 "	1 " "	7 16 0 "	7 10 0
4 " "	2 8 0 "	2 4 0 "			

Observe the Trade Mark.—"A Horse's Head on the top of each Pot, and the signature, R. J. James."

Wholesale Agents, TUTTLE & CRISP, 4 Cheapside; NEWBURY, 37 Newgate Street; MAW, SON & THOMPSON, 11 Aldersgate Street; HAYES & CO. Dublin; GOULDING, Cork; FOGGITT, Thirsk; and SANG & BARKER, Edinburgh. Agents for the Colonies required. Apply, with reference, to R. J. JAMES, 15 Union Bank Buildings, Ely Place, London, E.C.

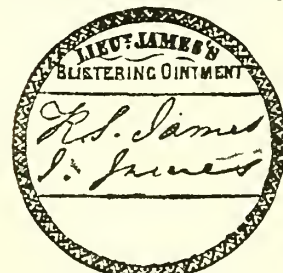
JAMES v. JAMES.—LORD ROMILLY, the Master of the Rolls, on February 23, 1872, declared "that I had an equal right with other members of the Inventor's family possessing the receipt to make and sell this Blister."—R. J. JAMES.

ESTABLISHED 1833. HORSES.—LIEUT. JAMES'S BLISTER.

CAUTION.

The annexed Label is at the top of every Pot of the ORIGINAL and only GENUINE BLISTER.

The Messrs. Barclay & Sons, 95 Farringdon Street, London, and Messrs. Raimes & Co., Edinburgh, Liverpool, and York, are now and have been Agents 45 years.



AGENTS:—Sutton & Co., 10 Bow Churchyard; W. Edwards & Son, 157 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans, Lescher & Evans, Bartholomew Close; Burgoine, Burdidge & Co., 16 Coleman Street; Lynch & Co., 171A Aldersgate Street; W. Mather, Farringdon Road, London, and Manchester; Tidman & Son, Wilson Street; Sanger & Son, 150 Oxford Street; Millard & Sons, 40 Charterhouse Square; Corry & Soper, 58d Tames; A. A. Campbell, Leadenhall Street, London; Woolley, Sons & Co., 59 Market Street, Manchester; Apothecaries' Company, Virginia Street, Glasgow; Boileau & Co., Bride Street, Dublin; McMaster & Co., 121 & 122 Capel Street, Dublin; Hunt & Co., 17 Westland Row, Dublin; Clarke & McMullen, Victoria Street, Belfast; D. Galbraith, Londonderry. And by all Chemists, in Pots, 1/6, 2/9, and 5/1.

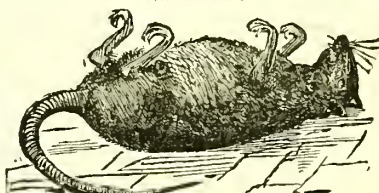
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R. S. JAMES, 31 Years Sole Manufacturer, STANFORD, FARINGDON, BERKS.
Advertised in "Bell's Life" 45 years. Beware of a Spurious Imitations.

100 Rats destroyed for a Shilling by BARBER'S PHOSPHOR PASTE.

WRAPPED NEATLY FOR THE COUNTER.

Handsome attractive Posters supplied; if conspicuously placed will command constant sale.

Kills Rats, Beetles, &c.
THE DEAD VERMIN
DRY UP
WITHOUT SMELL.



Guaranteed the best
destroying Paste in
the world.

3d., 6d., 1s., 2s. 6d., and 5s. Tins. Also

BARBER'S VERMIN KILLER.

SOLD THROUGHOUT THE WORLD.

Kills Mice upon the spot. In packets, 3d., 6d., and 1s.
Be not deceived with worthless imitations. Observe the Name!!
The VERMIN KILLER sent free by post at the following prices:

2d.	3d.	6d.	1s. Od.
1s. Od.	1s. 6d.	3s. Od.	6s. Od. .. Per Dozen.

The PHOSPHOR PASTE, at same prices. Carriage paid per rail for enclosure to any Wholesale House, or direct, for quantity of either Paste or Killer.

Special arrangements are made for Sole Agency with Chemists.

WORKS. SALISBURY: ESTABLISHED 1848.

Special Quotations to Shippers. Supplied by all the London Wholesale Houses.

PAPIER-MOURE,

OR FRENCH CHEMICAL FLY PAPER.

PRICE TO THE TRADE—

Per Thousand Sheets	...	...	...	...	...	...	...	21s. 0d.
Packets containing 5 Sheets (3d.), per dozen	...	...	...	...	...	...	...	1s. 6d.
Packets containing 10 Sheets (6d.),	...	...	...	...	...	...	...	3s. 0d.
10 per cent. and 5 per cent. cash Monthly.								

INSECTICIDE-VICAT.

PRICE TO THE TRADE—

n Bottles	...	...	...	...	...	per dozen,	3s. 9d. and 7s. 6d.
n Bellows Boxes	„	3s. 9d.
n Tin Bellows	„	7s. 6d.
10 per cent. and 5 per cent. cash Monthly.							

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S. MAW, SON & THOMPSON,
7 to 12 ALDERSGATE STREET, LONDON.

CRAWSHAW'S SPECIALITIES.

6. DYES..(14 to the Doz.)..In ½-gross Counter Cases..48/- Gross.	3d. PERFECT BLACK DYE..In ½ Gross Wood Boxes	21/- Gross.
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3. DYES..In ½ Gross Boxes21/- Gross.	3d. BOXES CRAWSHAW'S INSECT POWDER..In ½ Gross Wood Boxes	21/- Gross.
2. DYES..On ½ Gross Cards .....14/- Gross.	1d. BOXES CRAWSHAW'S INSECT POWDER..In 1 Gross Wood Boxes	7/- Gross.
2. DYES..In ½ Gross Boxes .....14/- Gross.	1d. BOXES CRAWSHAW'S INSECT POWDER..Mounted on Cards of ½ Gross....	7/- Gross.
1. DYES..In 3 Gross Counter Case, with glass lid 7/- Gross.	3d. BOXES CRAWSHAW'S BEETLE POWDER..In ½ Gross Wood Boxes	21/-Gross.
1. DYES..On ½ Gross Cards 7/- Gross.		
1. DYES..In ½ Gross Boxes7/- Gross.		
6. PERFECT BLACK DYE..In ½ Gross Wood Boxes		48/- Gross.

E. CRAWSHAW & CO.,

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THE CONDY'S FLUID CO.,

7 Falcon Street, London.

BEWARE OF MEAN AND ACTIONABLY FRAUDULENT IMITATIONS OF OUR FIRM AND GENUINE PRIZE MEDAL LABELS, WITH FICTITIOUS ADDRESSES.

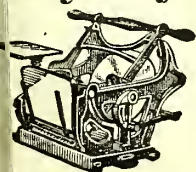
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"Let those now Print who never did before, and those who always Printed Print the more."



Cheapest **CONDY'S FLUID** of All.

CONDY'S FLUID RED (with Original Prize Medal Labels).

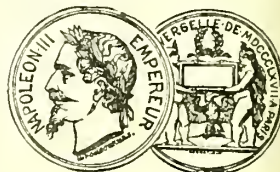


LONDON, 1862.

1s. size, 4s. per doz.

2s. „ 8s. „

4s. „ 16s. „



PARIS, 1867.

CONDY'S OZONISED WATER (for Toilet purposes).

2s. size, 8s. per doz. 3s. 6d. size, 16s. per doz.

All Wholesale Houses supply our Genuine Articles at our REDUCED PRICES.

Order R. CONDY & CO.'S Fluid and insist on being charged our REDUCED PRICES.

ADDRESS FOR ORDERS—

R. CONDY & CO., CONDY'S FLUID WORKS, LONDON, S.W.

ESTABLISHED A QUARTER OF A CENTURY.
AWARDED 53 GOLD AND SILVER MEDALS BY VARIOUS AGRICULTURAL SOCIETIES.

TIPPER'S MEDICATED POWDERS,

Specially prepared for Horses, Cows, Pigs, Sheep, and Poultry. They surpass anything ever introduced, preserve health, strength, and condition, cure Coughs, Colds, Worms, &c., and are the best known preventives of disease. Will keep in any climate. Sold in 1s., 4s., 12s., and 24s. Canisters.

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Keep Dogs in good condition and free from disease.

TIPPER'S LACTEAL COMPOUND,

For rearing Calves without Milk, and improving their condition.

These are the only preparations of the kind manufactured by a qualified Veterinary Surgeon.

B. C. TIPPER & SON, M.R.C.V.S., BALSALL HEATH, BIRMINGHAM.

CRAVEN'S VERMIN POISON,

For the effectual Destruction of RATS and MICE.

Guaranteed Second to None. Sale Increasing Daily.

USE CRAVEN'S VERMIN POISON,

For the efficacy of which numerous Testimonials have been received. Sample Packets Post Free. Prices, 2d., 3d., 6d., and 1s.—1s., 1s. 6d., 3s., and 6s. per dozen. Carriage Paid. Counter Bills.

F. CRAVEN, Chemist, Batley Carr.

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Prize Medal at 10 Exhibitions. First Prize Sydney 79; highest reward for Dietetic Purpos.—**LIEBE'S SOLUBLE LEGUMINOSE**, sole soluble Flour for Soups; requires no cooking; cheaper than Biscuits. Leghilla, common Leguminose &c. samples free.—Chocolate with Liebe's Soluble Leguminose Cocoa with id.—**LIEBE-LIEBIG'S SOLUBLE FOOD** for Infants, prepared in vacuum upon Baron Liebig's principles.—**LIEBE'S EXTRACT OF MALT**, pure, concentrated, and unfermented; the same with cod liver oil, iron, quinine and iron, lime, hops; lozenges.—**LIEBE'S PEPSINE WINE**, digestive liquor. Export to any climate. Prospectus free on application.—AGENTS—London: F. Newbery & Sons, 1 King Edward street; A. & M. Zimmermann 21 Minerva Lane; Hitchin: Perks & Llewellyn.

By Appointment to H.R.H.

the late Prince Consort.

BIGG'S SHEEP AND LAMB DIPPING COMPOSITION,

For Destruction of Ticks, Lice, &c., and Prevention of Fly.

HAS NOW BEEN USED WITH GREATEST SUCCESS FOR NEARLY HALF A CENTURY.

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LEICESTER HOUSE, GREAT DOVER ST., BOROUGH, LONDON.

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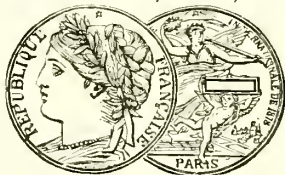
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		1 lb. size.	1/- size.	6d. size.		1 lb. size.	1/- size.	6d. size.
ANISEED LIQUORICE		Per doz.	Per doz.	Per doz.		Per doz.	Per doz.	Per doz.
BLACK CURRANT		30/-	8/-	4/-		32/-	8/6	4/4
DELECTABLE		"	"	"		"	"	"
EXTRACT OF MALT		"	"	"		"	"	"
GLYCERINE		"	"	"		"	"	"
LICHEN		"	"	"		"	"	"
LIQUORICE		"	"	"		"	"	"
MAGNUM BONUM		"	"	"		"	"	"
PECTORALE		"	"	"		"	"	"
PINE (Pâte de Jujube)		"	"	"		"	"	"
RASPBERRY		"	"	"		"	"	"
ROSE		"	"	"		"	"	"
TAMARIND		"	"	"		"	"	"
VIOLET		"	"	"		"	"	"
VOICE		"	"	"		"	"	"

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GUIMAUVE PASTILLES
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PER LB.

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PECTORAL FRUIT PASTILLES.

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A bronchial and pulmonic Jujube of
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Sold only in round boxes, to retail at 1/-, 1/9,
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GUIMAUVE PASTILLES (Crystallized).....2/6 per lb. } The two can be
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CRYSTALLIZED FRUIT PASTILLES2/- per lb. } Various assorted
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MEDICATED THROAT PASTILLES.

Prepared as originally suggested by Dr. PROSSER JAMES,

Lecturer on Materia Medica and Therapeutics, London Hospital; Physician to the Hospital for Diseases of the Throat, &c.

- 1.—Morphia. ($\frac{1}{30}$ of a grain.)
- 2.—Ipecacuanha. Are readily taken by children. These Pastilles are of the same strength as the B.P. lozenges.
- 3.—Morphia and Ipecacuanha. ($\frac{1}{30}$ grain Morphi., and $\frac{1}{2}$ grain Ipecac.)
- 4.—Compound Morphia and Ipecacuanha. A more active remedy than No. 3. ($\frac{1}{30}$ grain Morphi., $\frac{1}{2}$ Ipecac., $\frac{1}{2}$ Squill, &c.)
- 5.—Opium and Belladonna. An agreeable substitute for the Troch. Opi B.P., and of the same strength.
- 6.—Aconite. Each Pastille equivalent to half a drop of the B.P. Tincture.
- 7.—Compound Camphor or Voice.
- 8.—Chlorate of Soda. May be taken whenever the throat is uneasy.
- 9.—Lithia. An agreeable mode of taking this alkali. Each Pastille contains 1 grain.
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